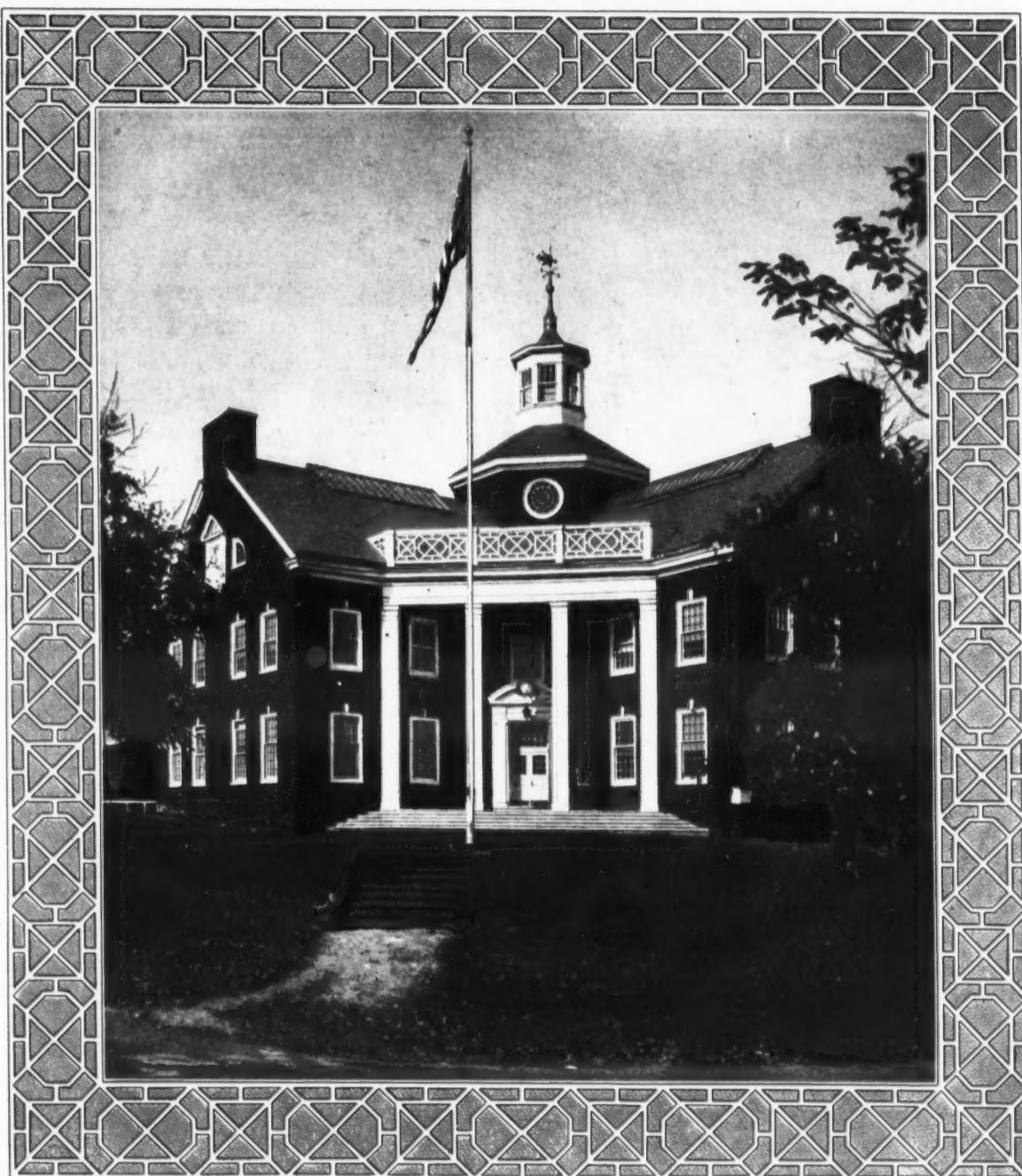


MAY 3 - 1930

THE AMERICAN
School Board Journal
A PERIODICAL  SCHOOL ADMINISTRATION.



May 1930

THE BRUCE PUBLISHING COMPANY

New York

MILWAUKEE, WIS.

Chicago

MAKE IT IMPOSSIBLE FOR CHILDREN TO FORGET

*Install **VOGEL** Number
Ten Seat-Action Closets*



Vogel Number Ten Seat-action
Closet, with tank exposed

Some Tests!

We took a Number Ten Closet from stock and automatically opened and closed the valve 150,000 times without stopping. At the finish of the test it showed not the slightest sign of wear; not even a washer needed renewing. This is equivalent to 20 years' hard use. Now we have a stock closet on an endurance test and it has flushed under actual operating conditions 120,000 times. The test continues indefinitely.

Write us for complete information on the **VOGEL** Number Ten. We are always glad to work with school architects and furnish complete roughing-in measurements.

JOSEPH A. VOGEL COMPANY
WILMINGTON, DEL. ST. LOUIS, MO.



Vogel Number Ten-A syphon ac-
tion bowl, with tank concealed

VOGEL PATENTED Products

SOLD AND INSTALLED BY PLUMBERS EVERYWHERE

A teacher's views on Natural Slate Blackboards



Louise B. Hamilton
Teacher in the
School District of
Atlanta, Georgia



Natural Slate Blackboard Co.
Pen Argyl,
Pennsylvania.

Gentlemen:

In answer to your inquiry it is with pleasure that I express my opinion that Natural Slate Blackboards as applied to the classroom are incomparable in every way. I am sure that every teacher in the Atlanta system will agree with me.

During my many years of teaching I have found from experience that Natural Slate Blackboards are easier to write on, easier to clean, and according to our Medical Inspector are more sanitary.

The most outstanding recommendation is the fact that every one of our new buildings are equipped with Natural Slate Blackboards.

Yours truly,
Louise B. Hamilton

Surely everybody realizes that the true "inside story" of schoolroom equipment must come from the teacher.

It is the teacher who uses NATURAL SLATE BLACKBOARDS day in and day out. It is the teacher who sees the hard usage,—the daily wear and tear NATURAL SLATE BLACKBOARDS receive. It is the teacher who experiences how ably they stand up—how sanitary they are—how easy they are to write on and how easy to read from.

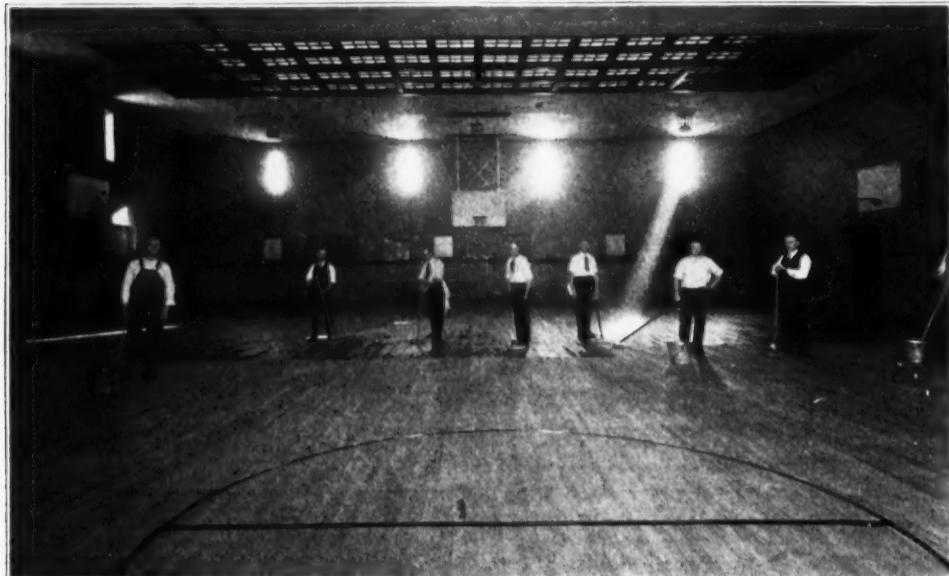
It is the teachers' word that should bear enormous weight when it comes to selecting equipment.

That is why Louise B. Hamilton's letter of endorsement, reproduced here, should mean so much to all those considering blackboards.

Two booklets completely describing NATURAL SLATE BLACKBOARDS . . . specifications . . . data . . . and an interesting story on the quarrying and finishing will be cheerfully mailed you upon request.

NATURAL SLATE BLACKBOARD CO., 540 ROBINSON AVE., PEN ARGYL, PA.
BRANCH OFFICES IN ALL PRINCIPAL CITIES

NATURAL SLATE BLACKBOARDS
Natural Slate Blackboards Outlast the Building



MIDLAND MAINTENANCE MEN — — —

Midland Salesmen (Maintenance Engineers) refinish a badly used gymnasium floor in a Dubuque High School.

EVERY DEPARTMENT —

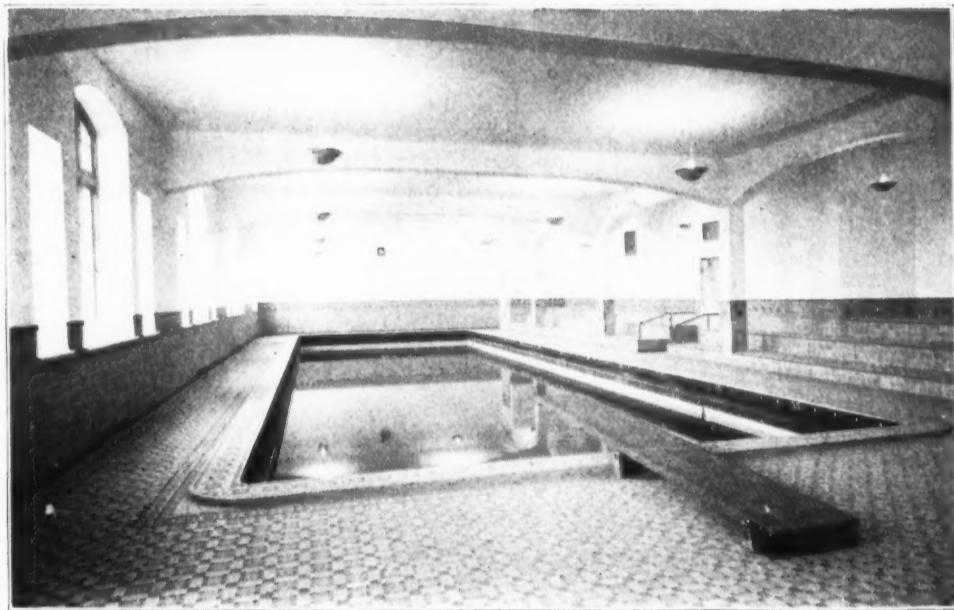
of school building maintenance—every angle of economical upkeep—has been scientifically approached by Midland Maintenance engineers —

THE RESULT—

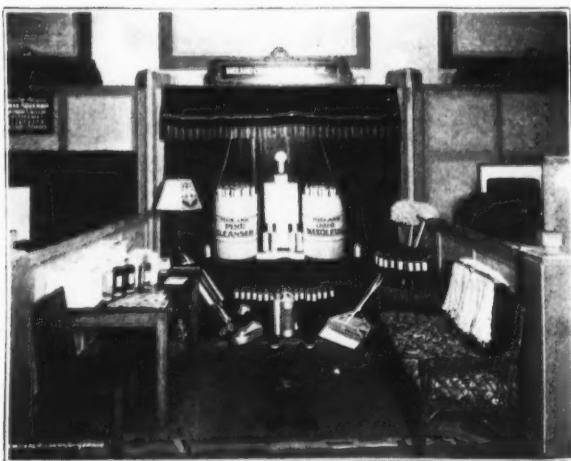
has been the perfection of Midland System of School Housekeeping — Modern — efficient and economical of time and money.



A Midland School Housekeeping Exhibit—hundreds of school authorities visited this booth at Atlantic City—where the Midland System was explained and demonstrated.



Swimming Pool—Clarke College, Dubuque, Iowa. This beautifully tiled pool has been pronounced the equal of any in the country both in construction and color treatment. Here several hundred students in this select girls' college enjoy the benefits of this healthful recreation. This pool is kept spotless.

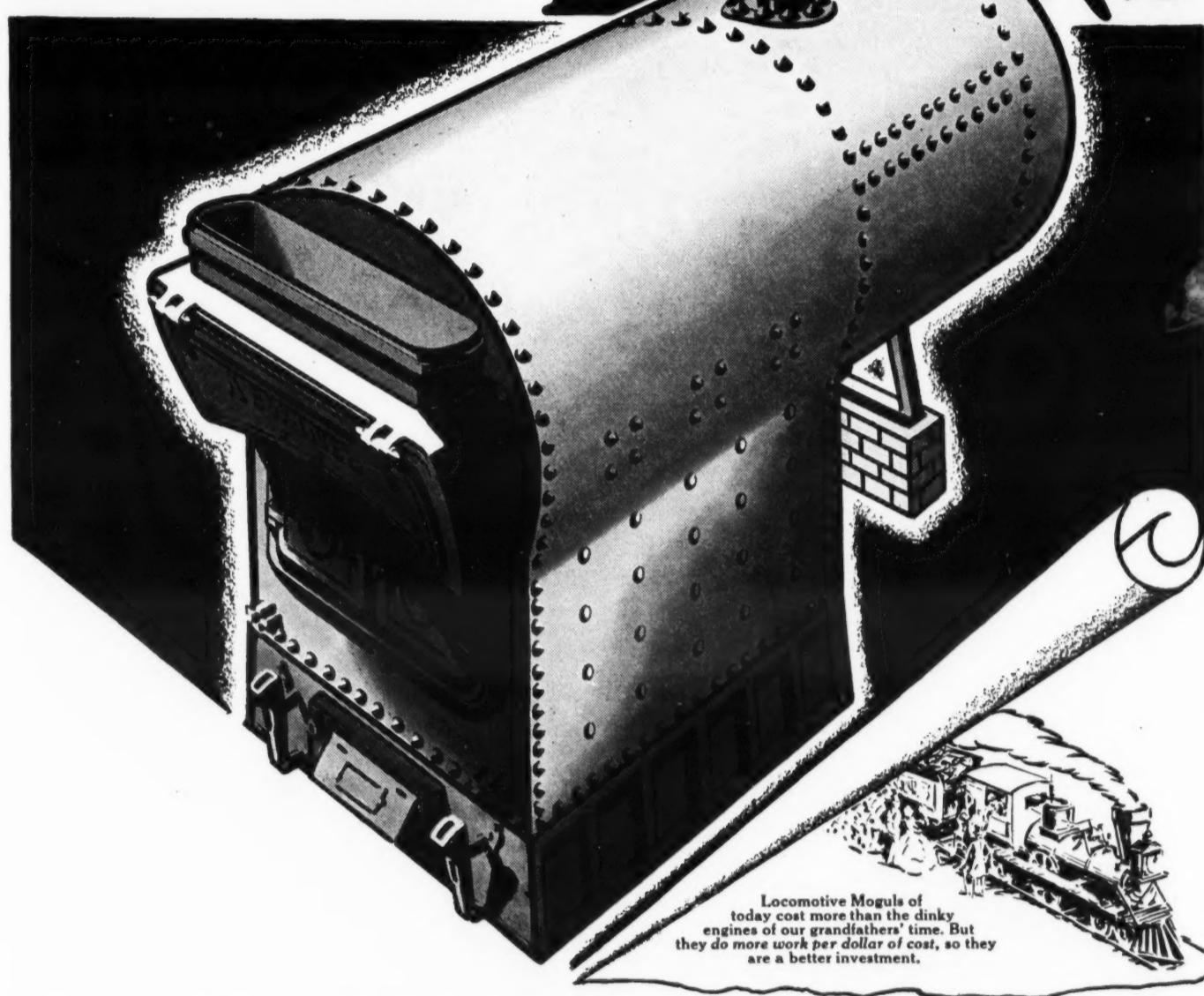


Those in charge of school-building upkeep are invited to receive the benefits of the efforts of Midland Engineers—

Write for complete information on Midland System of School Housekeeping.

Midland Chemical Laboratories, Inc.
Dubuque, Iowa, U. S. A.

KEWANEE STEEL BOILERS



*Locomotive Moguls of
today cost more than the dinky
engines of our grandfathers' time. But
they do more work per dollar of cost, so they
are a better investment.*

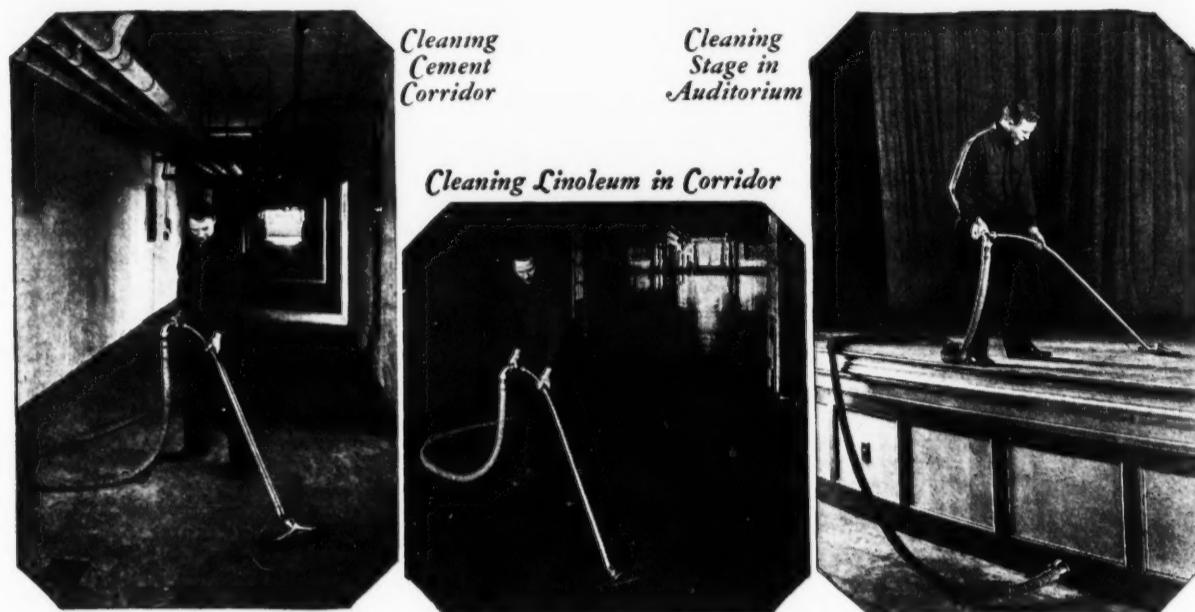
Kewanee Boilers, with their riveted steel construction, are built "oversize" and "overstrength." They *also* are capable of doing more per dollar of cost.

Then, too, the *extra years of life*

guaranteed by their sturdy construction spreads their initial cost over many additional years.

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The cleaning system that saves three ways...

THE Spencer Central Cleaning System protects the health of every child and teacher in the school by removing to a container in the basement all dirt and dust—from the finest chalk dust to the heavy dirt in the corridors and mats.

It saves time—because it is an easy and convenient method. It saves equipment—floors—

paint—books and decorations, by keeping the dirt constantly out of the building.

It saves in the boiler room—by cleaning the boiler tubes and floor—often the resulting economy pays the operating expenses of the system.

Leading educators and architects endorse it—and it is used daily in more than 1500 schools.

THE SPENCER TURBINE CO.

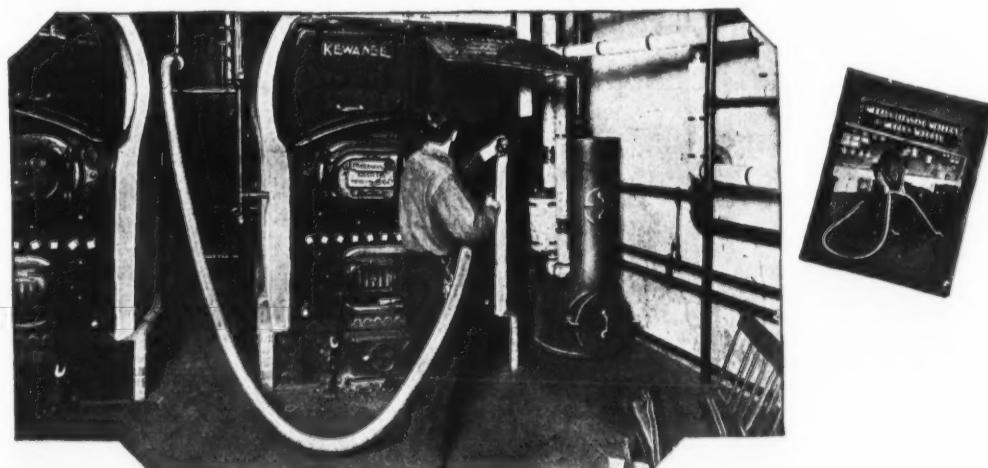
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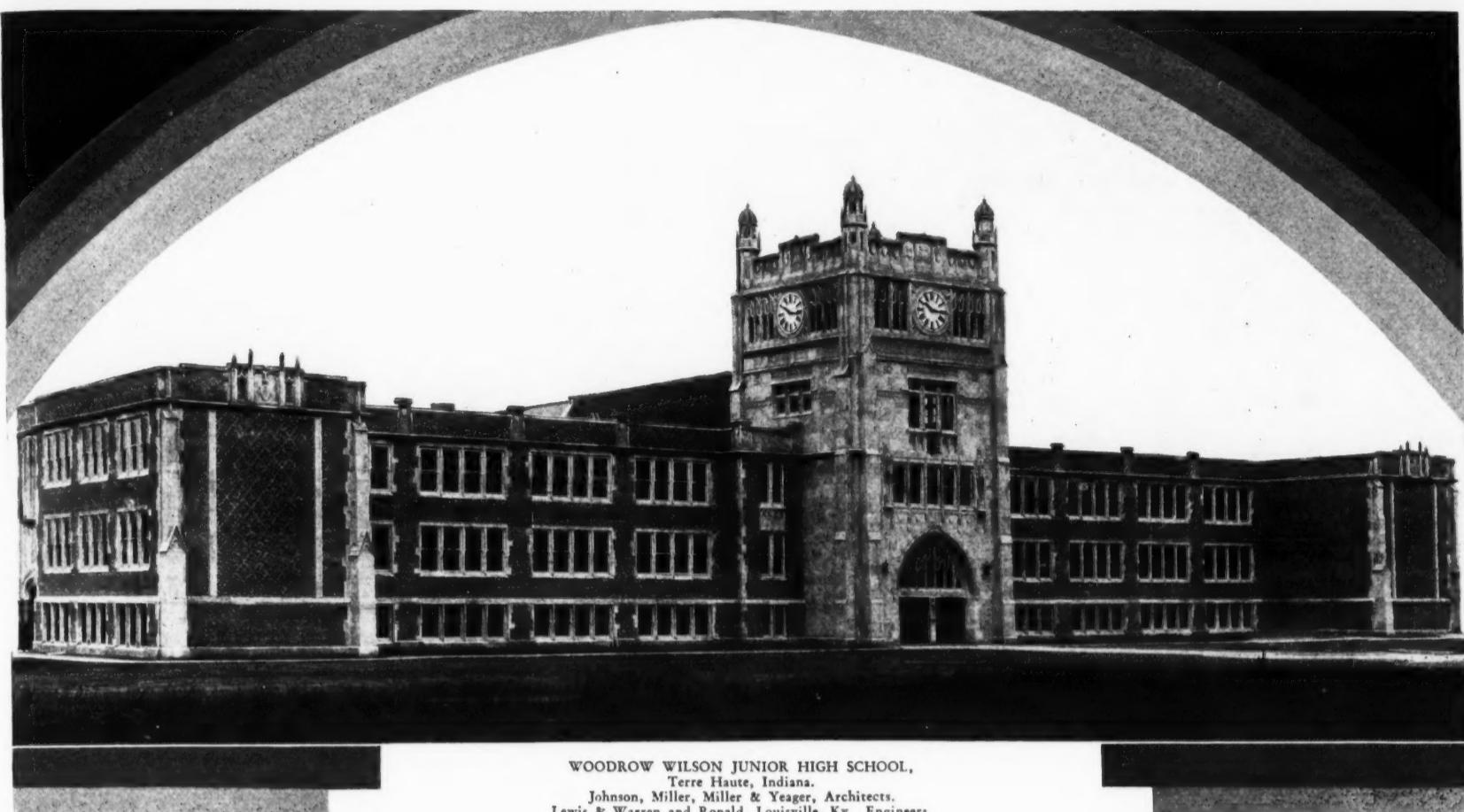
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Send for Booklet
When you remodel—or consider plans for a new school—ask for the Spencer booklet "Modern Cleaning Methods for Modern Schools."



Cleaning Boiler Tubes



WOODROW WILSON JUNIOR HIGH SCHOOL,
Terre Haute, Indiana.
Johnson, Miller, Miller & Yeager, Architects.
Lewis & Warren and Ronald, Louisville, Ky., Engineers.

Another School Building Application Of Johnson Control

Johnson Heat & Humidity Control is installed to conform with any requirement in the school building, applying to every form, system, and plan of heating and ventilating.

For example, The Johnson Dual Thermostat System controls the ventilation and the direct radiation throughout the Woodrow Wilson Junior High School, Terre Haute, Indiana. Johnson Dual Thermostats on the wall of each room automatically maintain a constant normal temperature during the time the rooms are in use, and a lower (or economy) temperature when the rooms are not in use: automatically turning the steam on or off at pre-determined hours, as the different rooms are to be occupied or vacated.

The control is divided into three units: one for the classrooms, one for the gymnasium, and one for the auditorium. Each unit operates sepa-

rately, and independently of the others, and according to the individual requirement of classroom hours, the gymnasium periods, and the auditorium use. It is not necessary to heat all of the building, during the day or night, for the desired comfort in the rooms occupied, and at a loss in the rooms not used or only occasionally occupied.

And it is not necessary to go from room to room to turn the steam on and off each morning and each night. The Johnson Dual Thermostats do that—reliably, consistently, and at a saving of manual attention and fuel consumption, the latter alone amounting to 25 to 40 per cent per year.

Johnson Control furnishes a definitely valuable automatic service of correct temperature regulation, and at the same time a huge economy in fuel. And the large number of school buildings that are equipped with The Johnson System indicates the accepted importance of Johnson Control. Write now for the interesting Johnson book of details.

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Type "B" Von Duprin devices, and insisting upon getting what is specified, are the keys to the ideal solution of the problem of giving the occupants of a building the surest possible protection from exit door disasters.

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Indianapolis, Ind.**

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Down the Death-Lined Streets a Tall, Gaunt Figure Strode

In 1879, a certain southern city was fighting its most desperate battle.

Throughout the town, unseen hosts of Yellow Fever germs made swift, silent raids, leaving grim trails of disease and death. Business stood still. Guardsmen patrolled the otherwise deserted streets.

Medical men fought desperately to stem the ever-swelling legions that marched against them.

Into this picture the first Clow Soldier of Sanitation was called. Down the death-lined streets he strode, a tall, gaunt figure—but the figure of vic-

tory. He cleaned up the sources from which the Yellow Fever armies drew replacements. And the medical men wiped out the enemy.

Today this man leads Clow's Soldiers of Sanitation in equally important battles against uncleanliness, insanitation, pollution and disease.

Each of these men is a specialist in working out plumbing installations in the public places, where disease germs rally so readily. At his finger tips is the experience from a time long before the great battle in a southern city—to the

modern battles in the schools, hospitals, industrial plants and public buildings of today. At his back is the most complete line of specialized plumbing fixtures in the world, designed to help him as no other fixtures can.



For 52 years, Mr. W. E. Clow, Sr., has led Clow's Soldiers of Sanitation by crowding into the heat of every fight where his years of skillful experience will turn the battle against insanitation, trouble and waste.

CLOW
CHICAGO
PREFERRED FOR EXACTING PLUMBING SINCE 1878

Wilson

SECTIONFOLD PARTITIONS

(REG. U. S. PAT. OFF.)



Sectionfold Partitions in Beebe Jr. High School, Malden, Mass. Architects, Desmond & Lord, Boston. Partition in background divides gymnasium into two parts. Section at left separates gymnasium from auditorium.

For Doubling the Usefulness of the Gymnasium and Auditorium

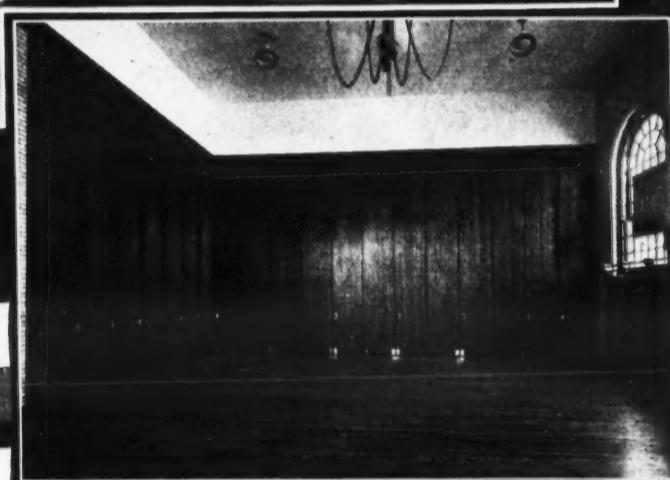
WHERE space is limited and the number of activities increases, Wilson Sectionfold Partitions can double or triple the usefulness of the Gymnasium and Auditorium.

As illustrated, Sectionfolds not only separate the auditorium and the gymnasium, but the latter is divided into two parts when necessary.

The Partitions may fold into pockets when not in use, giving full use of the combined gymnasium and auditorium and forming an "Indoor Stadium."

Other outstanding advantages are as follows:

1. Prevent interference between participants of different games.
2. Avoid necessity for permanent hand ball and squash courts. Space for such courts can be sectioned off at will and then made part of the main gymnasium when desired.



Another view of the gymnasium, showing division for different activities in all three rooms.

3. May be equipped with slate blackboards for classroom use.
4. Small doors in partitions give easy access to all rooms.
5. Panelled differently on both sides, if desired, to harmonize with surroundings.
6. Adapted to old buildings as well as those under construction.
7. Perfect operation because of our own installation and service offices in all principal cities.
8. Woodwork and hardware all products of our factory and all of best quality obtainable.
9. Five year guarantee with each installation.
10. Fifty years' experience in the field enables us to offer partitions which are far superior to others in appearance and durability and are far more economical in the long run.

Get full details and illustrations showing how SECTIONFOLDS are increasing the gymnasium and classroom facilities of modern schools.

Send for Catalog No. 14

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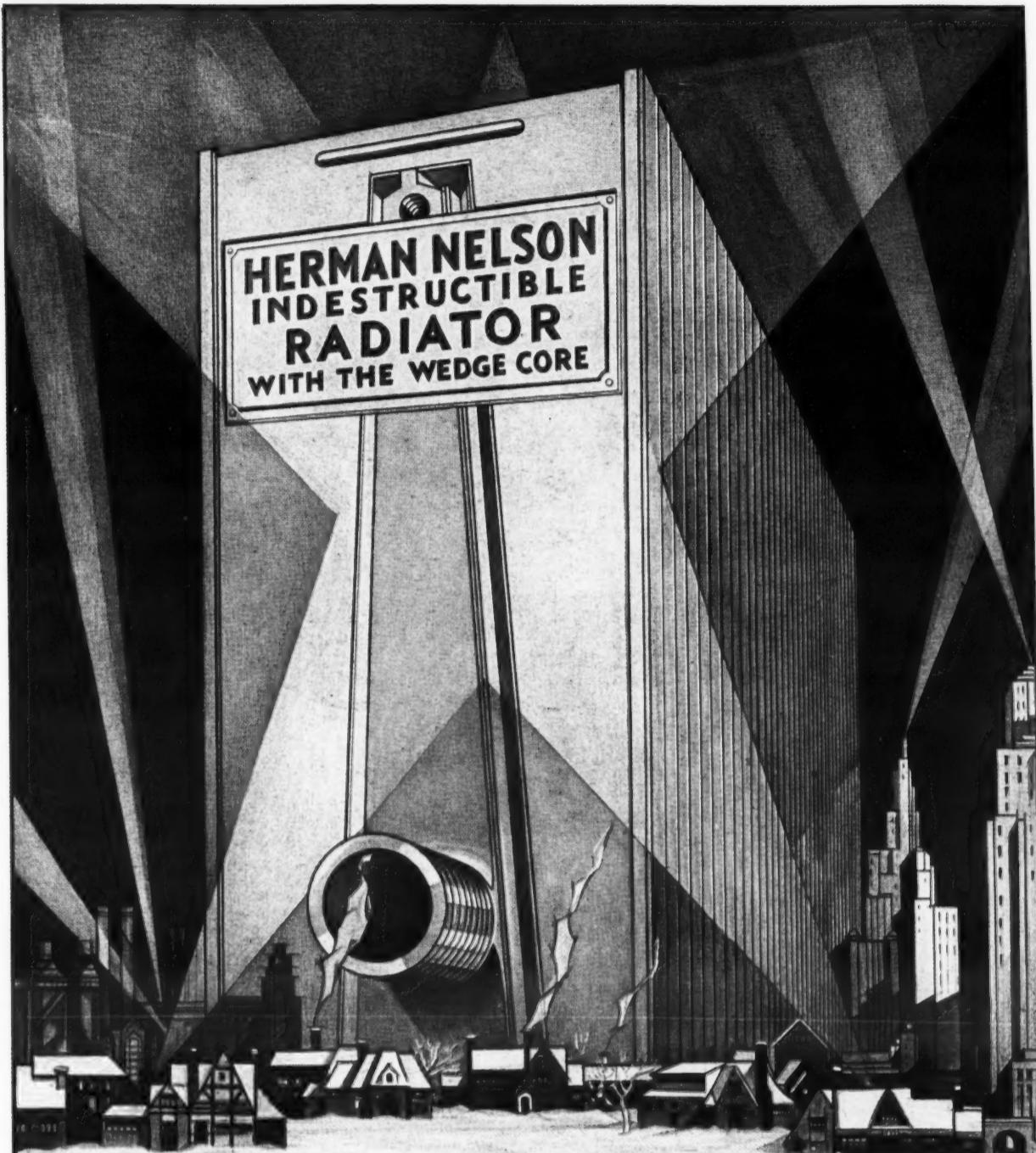
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MOLINE
ILLINOIS

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Now she enjoys "recess air" right in the schoolroom

GET the spirit of vibrant glowing health, and sparkling alertness portrayed in this picture. It is through the practical realization of the Greek and Roman ideal of the "sound mind in sound body", that educators of today are fitting our school boys and girls to fulfill their responsibilities as leaders of America tomorrow.

In this great work Univent Ventilation has played an important part, for it makes it possible for the children to work in the same health giving invigorating atmosphere that they enjoy during recess. As a result standards of school attendance are higher in Univent Ventilated schools and the pupils are better able to concentrate—to grasp and retain the

fundamentals that will prove so valuable in future years. Teachers, too, find their work in such an atmosphere more interesting and less wearing.

The Univent draws air directly from outdoors—cleans and warms it to a comfortable temperature, and delivers it to every one in the room—with refreshing invigorating air motion, but without drafts.

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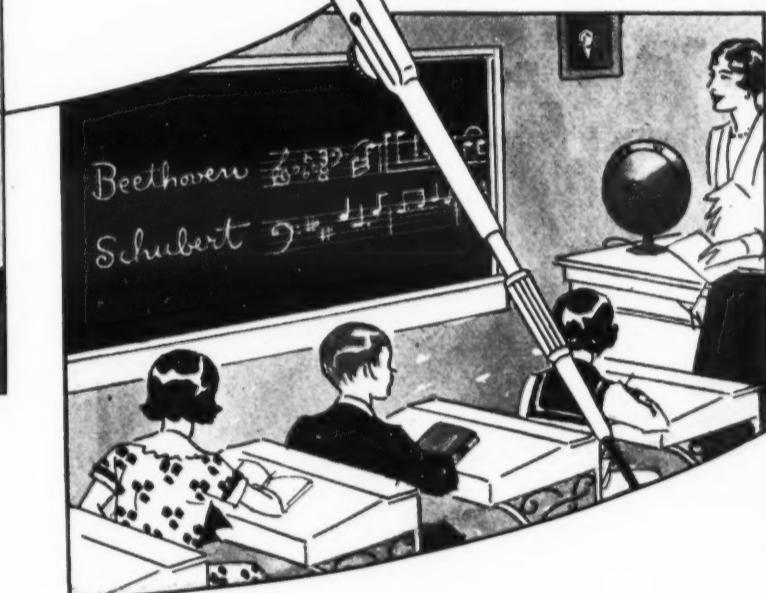
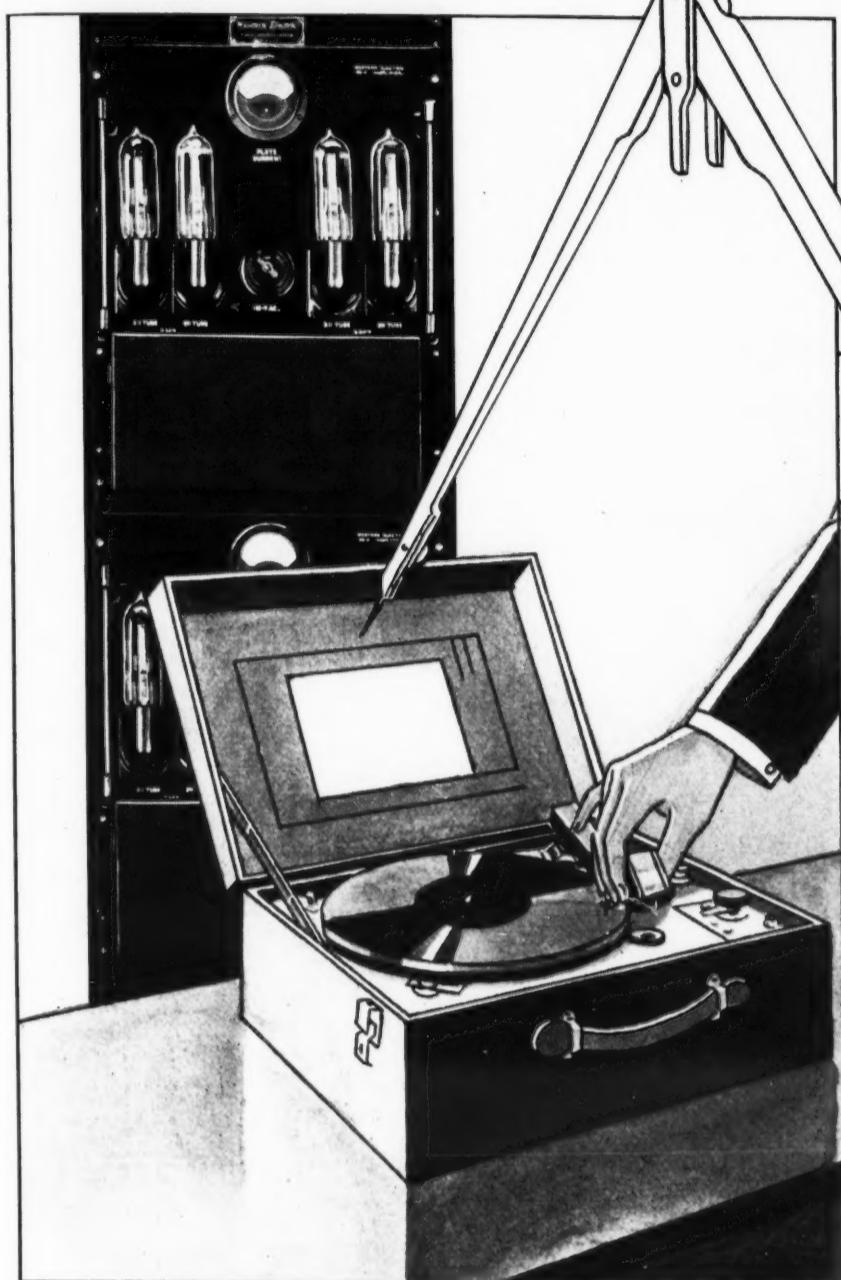
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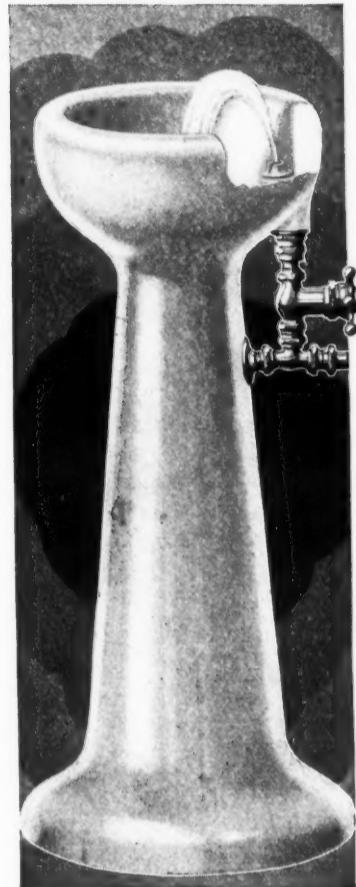
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Prove the value of Bay West Mosinee Towel Service to us.
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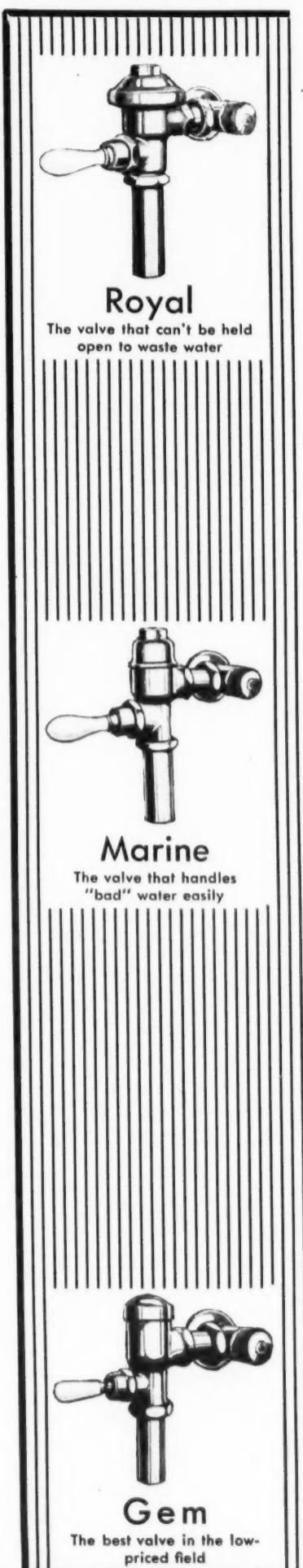
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For many years a few cities in this country and some foreign countries have required a preventive of back-syphonage, which the Sloan Valve Company has been furnishing with flush valves shipped to these markets.

Positive prevention

The above experience, together with the exhaustive investigations of Sloan engineers, has produced a new and positive safeguard against back-syphonage which hereafter will be furnished with all Sloan Flush Valves.

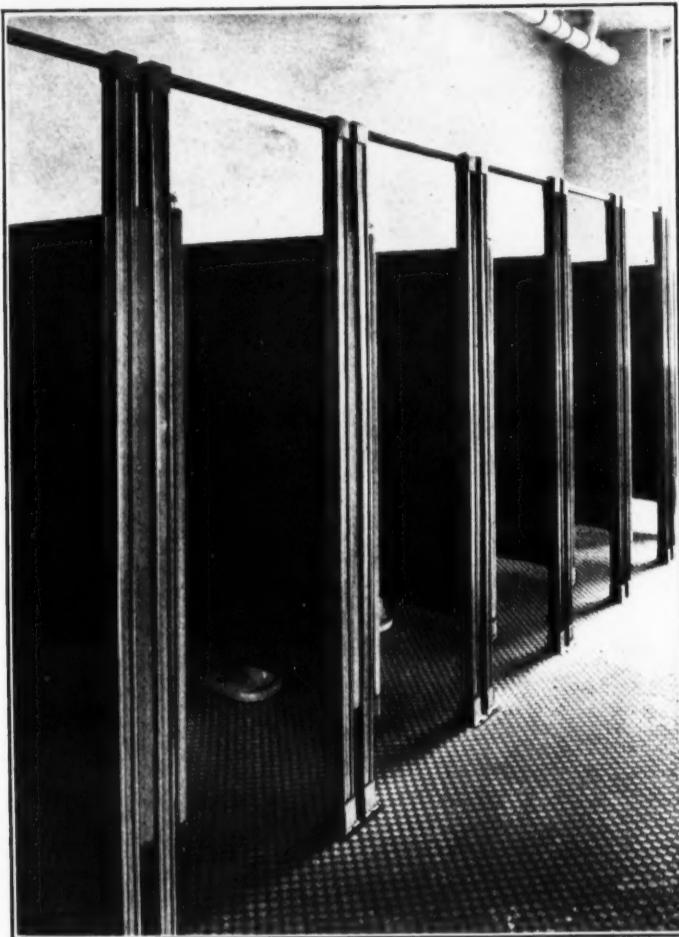
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The picture of an average American school toilet room of a generation ago is not pleasant to recall. Dark, dingy quarters, damp, dull, soggy. A place somberly lighted by the devil's lamp. A fit spot for the generation of much that added nothing to the moral hygiene of any adolescent human.

All that is altered now. Daylight, better sanitation—clean-cut Sanymetal steel compartments—have changed the picture. The toilet room is no longer an inviting loafing place for ingenious minds, but a place of wholesome atmosphere, in keeping with the school as a whole. What more eloquent pronouncement could be made upon the progress of Sanymetal Steel Partitions with the nation's schools?

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START THEM ON THE RIGHT ROAD TO HEALTH

How to keep well—that's the first and most important lesson which every child in your school should learn. And you can help to keep the youngsters well by equipping all your washrooms with an absolutely safe and sanitary towel—Victor. An extra quality towel made and guaranteed by the A. P. W. Paper Company, one of the oldest and largest manufacturers in the United States.

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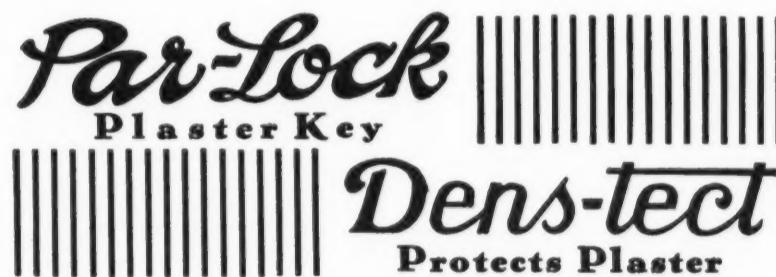
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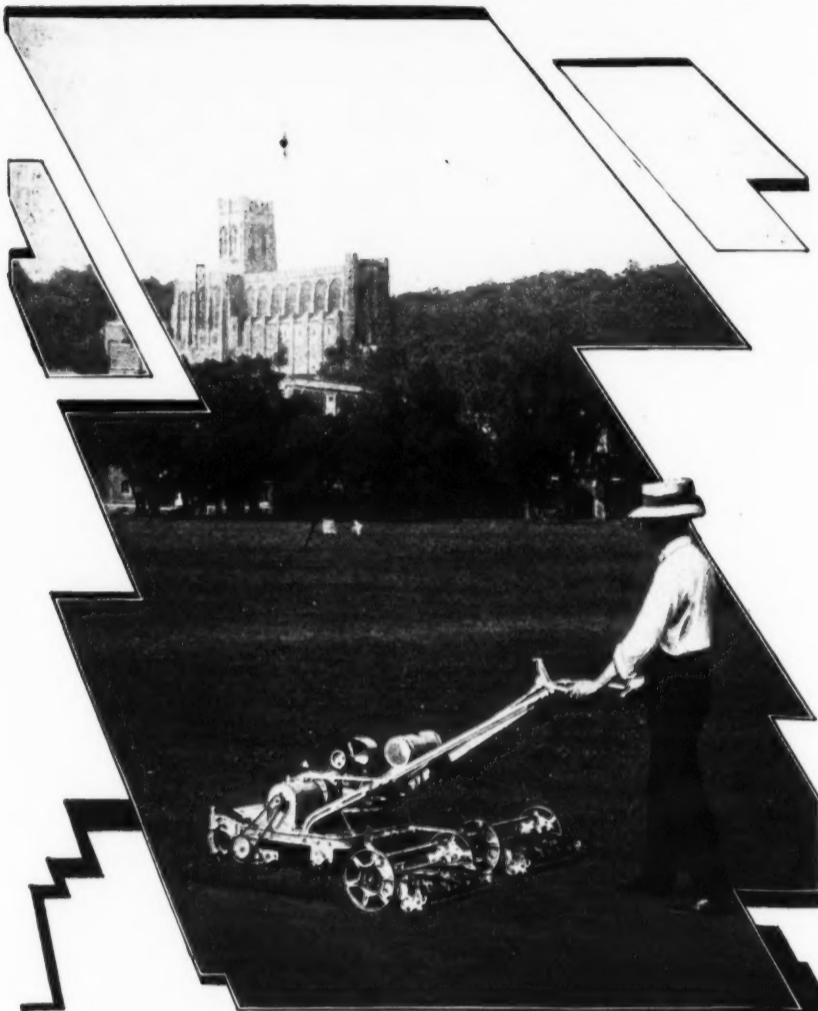
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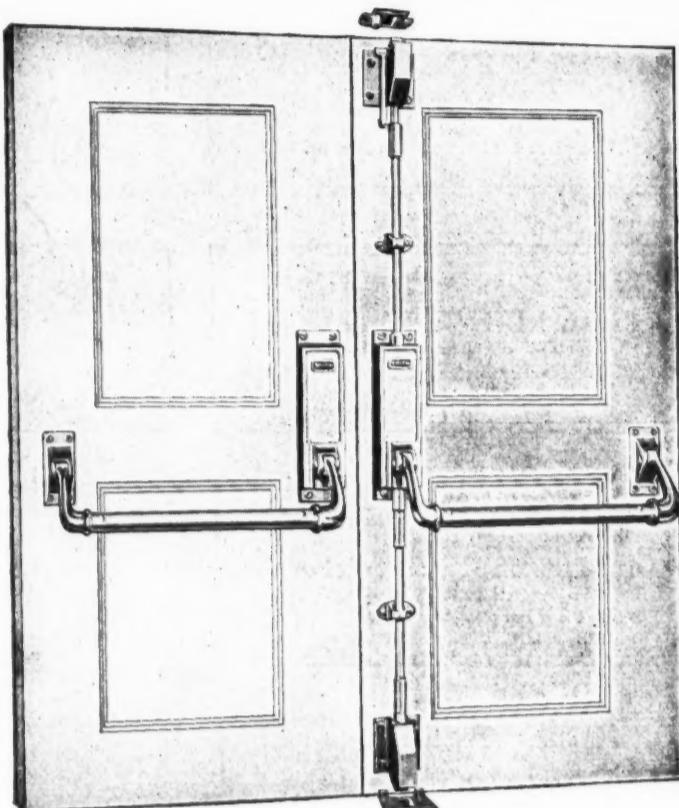
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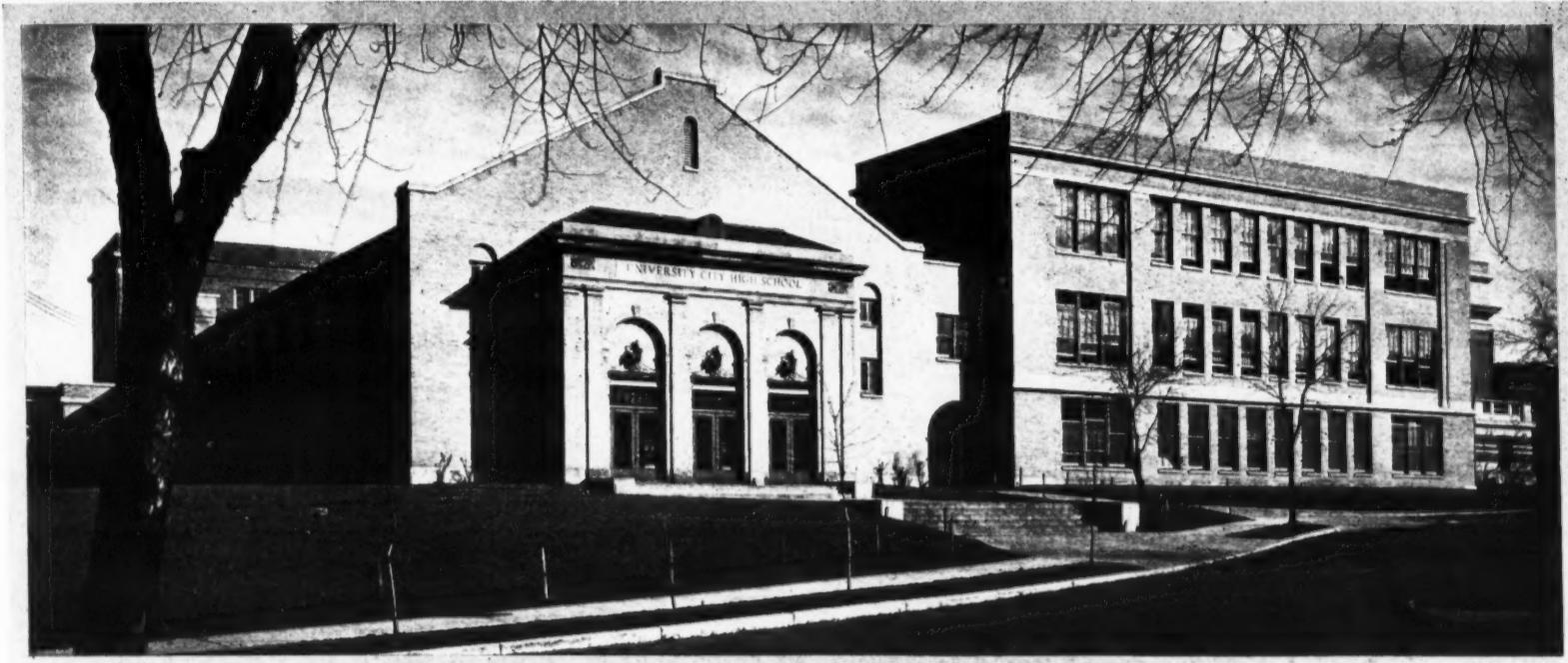
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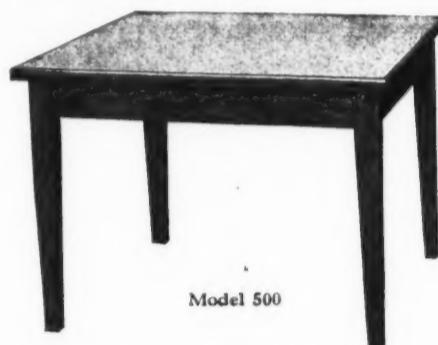
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Model 500 pictured here is a splendid table for cafeteria use. It is made in various sizes from 30 x 30" up to 30 x 96" and is covered with genuine green or brown Battleship linoleum. These tables are durable, quiet and very easily kept clean; features which are of paramount importance in any cafeteria installation.



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Model 329 illustrating 34 x 72" size is available in plain oak, imitation walnut, or imitation mahogany and in a variety of sizes. Drawers are dovetailed back and front with three-ply framed-in bottoms, finished inside. Undertop is finished and reenforced with cleat construction. Samson tables may be had with Battleship linoleum tops, if desired, at an extra charge.

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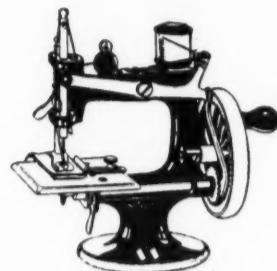
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The SINGER "20"
FOR ELEMENTARY GRADES

Not a toy but a real junior sewing machine, strongly built, safe, sews perfectly, clamps to any school desk, quickly put away in its own box. So simple that any child can use it. And it's absolutely safe—a special presser foot protects little fingers. Regular price complete with needles, thread and all necessary equipment, \$5. Special price to schools, \$3.



***The STUDENT MODEL
SINGER ELECTRIC***
FOR HIGH SCHOOLS AND COLLEGES

This modern Singer Electric is especially designed for classroom use. Its sewing mechanism is exactly like that of Singer Electrics used in the modern home. But in addition it has special features for the student's convenience—drawers and compartments for books and materials, cover with safety lock, adjustable knee control, legs of any desired height. It is the modern sewing machine for the modern school.

LITTLE Betty of 1A has just experienced a big surprise. The teacher has shown her how to fasten a little sewing machine to her own desk. She sits before it, turns its shining wheel, holds a bit of material with her chubby left hand, and sees a guarded needle make a perfect seam. In a jiffy she has made more stitches than she could make in a half hour working ever so carefully by hand. And in that precious moment of discovery the foundation of her whole attitude toward sewing has been formed for life.

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Our Educational Department will be glad to cooperate with any school interested in this new plan for teaching sewing in the early grades. Let us tell you, too, about the new Student Model Singer Electric, especially designed for classroom use and about our Singer Educational Service furnished free to schools and colleges.

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Singer Sewing Machines are Used Almost Exclusively in Schools Throughout the World

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SPECIAL SCHOOL FURNITURE

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**Swivel Seat
Adjustable Steel Stools**

Above. Height adjustment 25-35 inches. Hardwood or steel seat. Adjustable circular steel footrest. Also available with back rest. Olive brown enamel finish.



Adjustable Steel Stools

Shown above. 4-legged model. Height adjustment 20-30 inches. 15 inch Hardwood seat. Seamless steel pipe frame. Finished in olive brown enamel.



Stool with Back and Footrest

Shown below. Comfortable back and footrest optional on all models. Seat and footrest adjustable to desired height. Backrest has just enough spring to insure comfort.



**All-Steel
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Available with hard wood or steel seat. Seamless steel pipe frame, electrically welded. 3 or 4 leg models. Height and colors to suit specifications.



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Shown above. 3-legged model. Seamless steel pipe legs flattened and ground smooth at ends. Height adjustment 20-30 inches. Olive brown enamel finish.

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THE MODERN TREND IN ASSEMBLY ROOM SEATING

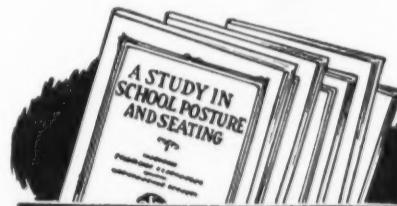
TODAY the modern school assembly room is literally a community theatre. Beyond serving as a meeting place for students, it has become a place of recreation and inspiration . . . a community center where the neighborhood may meet for the home forum or other gatherings of public interest.

So the seating should possess beauty of design and consistent architectural ornamentation to provide an atmosphere conducive to inspiration and high ideals. Features of comfort and correct posture proportion must be provided, too, without sacrifice of strength and durability—and all at reasonable cost.

"American" assembly room chairs have virtues and features built-in to meet this modern trend. The facts are available . . . investigate before you make your final selection.

FREE—Any or all of the following pamphlets are available to school officials and teachers interested in seating problems. They constitute conclusions reached by a seating authority, Dr. Henry Eastman Bennett, after exhaustive research and study.

- 1—Seating Equipment for High Schools.
- 2—Seating Arrangements in the Classroom.
- 3—School Seats too High.
- 4—Why Tables and Chairs in the Classroom.
- 5—Uses and Limitations of Movable School Seating.
- 6—The Buying of School Equipment.
- 7—A Study in School Posture and Seating.
- 8—Hygiene of the Seat Back.
- 9—School Posture in Relation to Visceral Organs.
- 10—Scoliosis and School Seating—A Study in Arm Rests.
- 11—Left Handedness.
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A PERMANENT INVESTMENT IN SEATING COMFORT—

Folding Chairs of Upholstered Steel

COMFORT has not been sacrificed for strength—nor has beauty been forgotten in the designing of these quiet, safe-folding chairs created by Lyon.

Like all Lyon equipment, these chairs, either with or without arms, are the finest that engineering skill can produce. They store compactly, open quickly and quietly, and are rigid. The modern fabric upholstery is washable. The beautiful finishes are durable and harmonizing.

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Strength—tubular steel—cross braces . . . Comfort—right posture angles—generous upholstery . . . Safety—broad base and rubber feet . . . Compactness—folds flat to 1½-inch space . . . Ease of operation—only three moving parts . . . Removable upholstery—easily cleaned . . . Pinch-proof hinges—no mashed fingers or torn clothing.

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Below — The most popular folding chair made is the famous Peabody No. 70.



North Manchester



Left — The "Panama" combination desk with noiseless hinge and the new Double Lip and Undercut method of joining wood and iron.

Below — Peabody Portable Assembly Chair Sections are built together — not simply individual chairs fastened to long section strips.



Indiana

Twenty-eight years of square dealing with American Schools has firmly established the Peabody reputation for quality of product and quality of service. We offer you without cost, the service of our seating experts in the solution of *your* problems.

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Day after day, year after year, in thousands of educational institutions VIKING Indestructible Steel Folding Chairs are standing up under the bangs, smashes, and misuse to which folding chairs are subjected.

In ever increasing numbers school superintendents are turning to the VIKING for the solution of their portable seating problem.



VIKING NO. 500
FOLDS FLAT WITHIN ONE
AND ONE-HALF INCHES



VIKING NO. 1000
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ONE INCH

*Furnished with steel and fibre
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*Color finishes: Olive Green,
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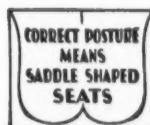
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"Trifles make perfection, and perfection is no trifle"



With this thought, the "Royal" experimental department, not content with the best Movable Desk from a competitive standpoint, is ever searching and seeking for improvements, to better seat the growing child to the entire satisfaction of the *particular* school board.

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The back and seat are curved to fit the body.
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No. 90



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We are anxious to send fully illustrated literature. Please write.



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STANDARD MFG. CO.

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*in Your School
Should Have This
Moeser Arm Top*

The efficiency of your teachers depends primarily upon the degree of intelligent reciprocation they meet on the part of their pupils—

And that reciprocation, it has been proven, is determined to a remarkable degree upon their comfort.

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The Moeser Supporting Arm Top can be furnished with any National School Desk.

We should like to supply you with complete information on this distinct advance in school seating. Write us for circulars, etc.



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Superintendent W. J. Hamilton of the Public Schools of Oak Park, Ill., wrote:

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Manufacturers of Complete School Equipment
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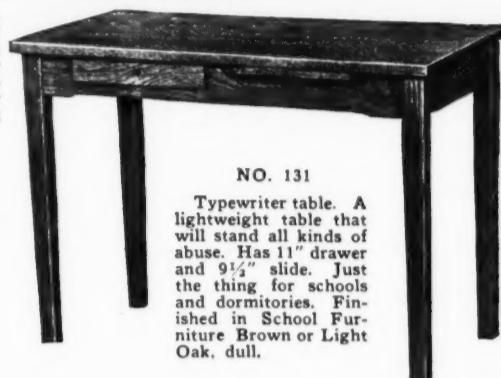


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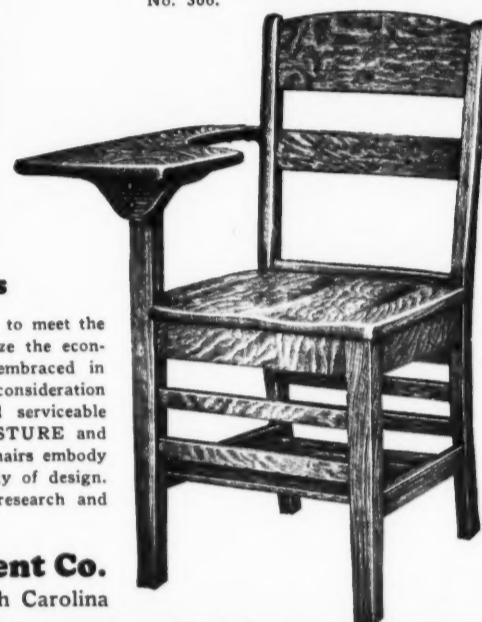
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Values ~ Above The Ordinary ~

CHAIRS OF STRENGTH-BEAUTY



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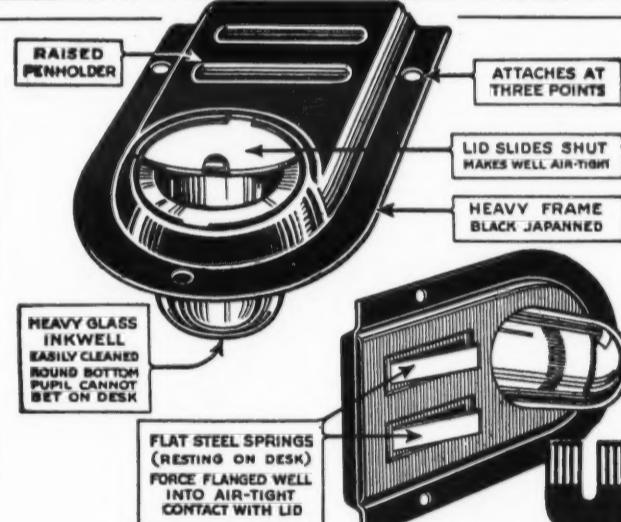
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- 1 A finish that doesn't scratch or chip.
 - 2 Can be upholstered with leatherette.
 - 3 Also finished in all colors of lacquer as desired.
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The U. S. Inkwell is dustproof and noiseless. It does not tempt pupils to waste time.

U. S. Inkwells can pass your most rigid examination. Check the answers to these questions:

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Yes, just drive in three tacks.
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Yes, it fits desks of any size. (Made in two sizes—Sr., Jr.)

3. *Is it quiet?*
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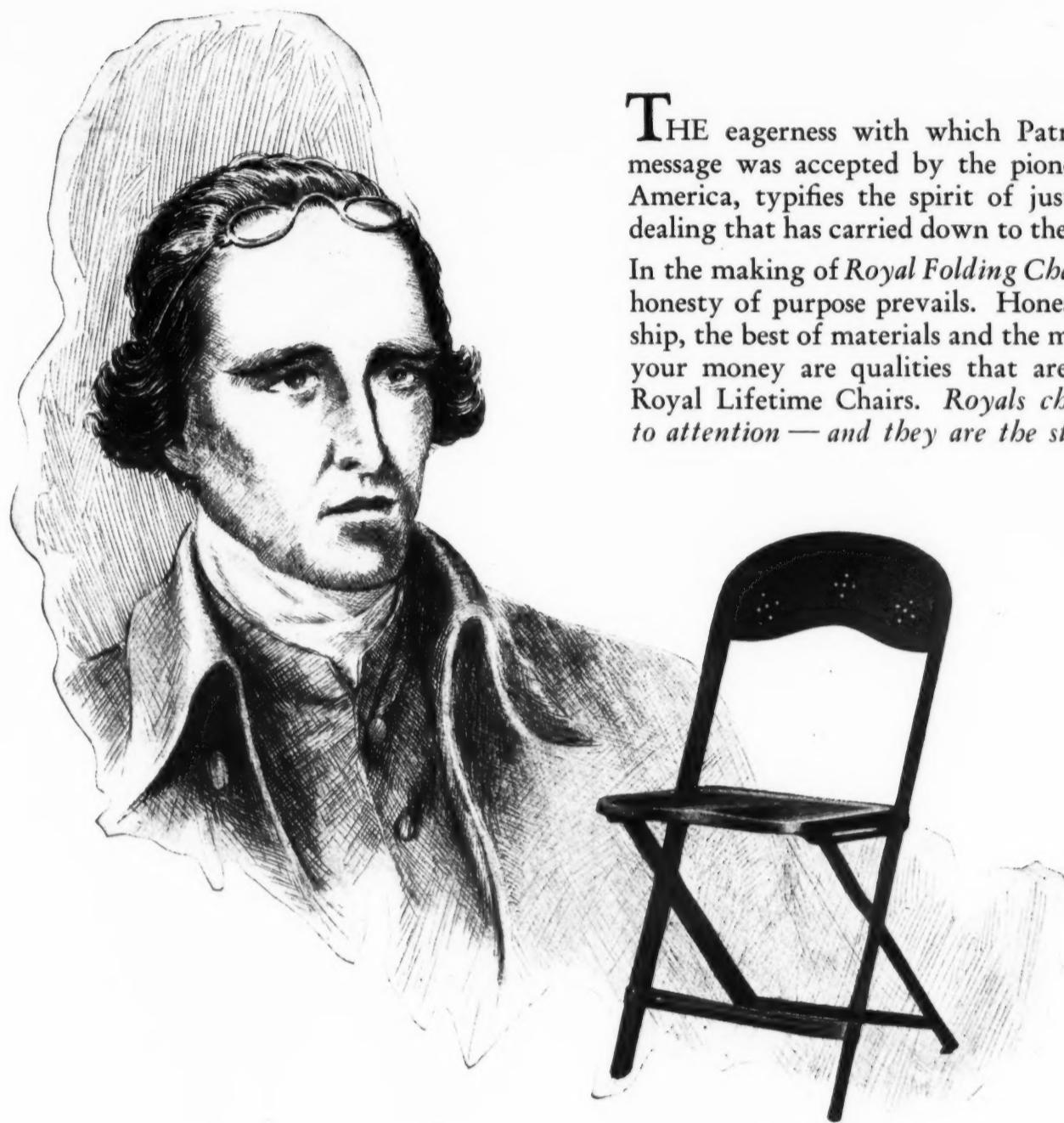
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Yes, because of low purchase cost and unusually long life.

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U. S. Inkwells are made and furnished with two size wells, one twice larger than the other. Write for samples of each so that you can see why it is much worth while to specify U. S. Inkwells—and determine which size best meets the needs of your school. You can get U. S. Inkwells from any school supply jobber or direct from our factory. Write today for prices and samples.

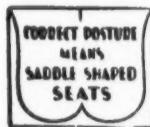
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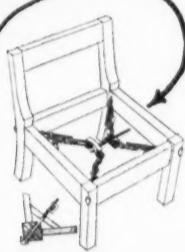
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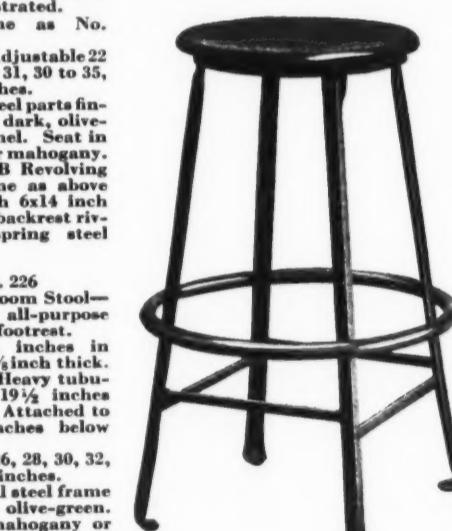
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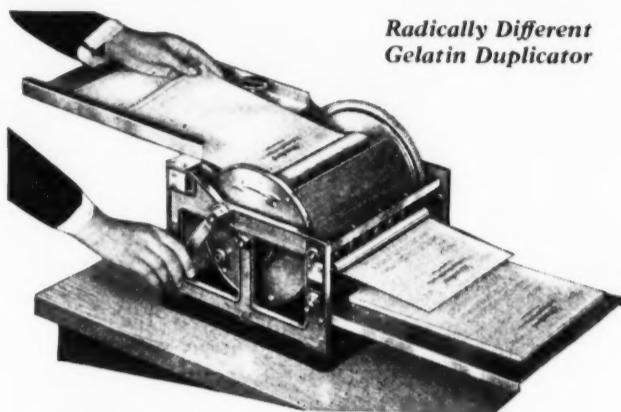
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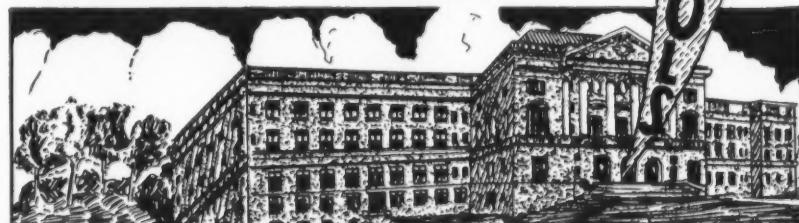
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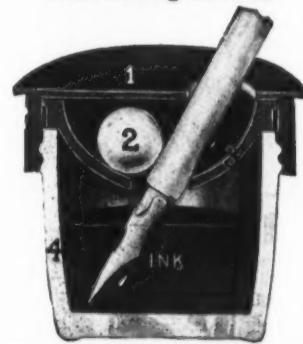
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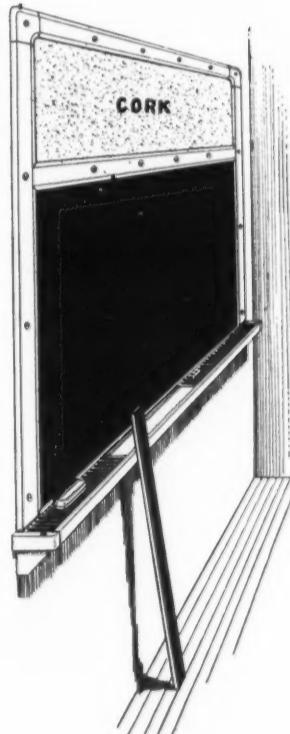
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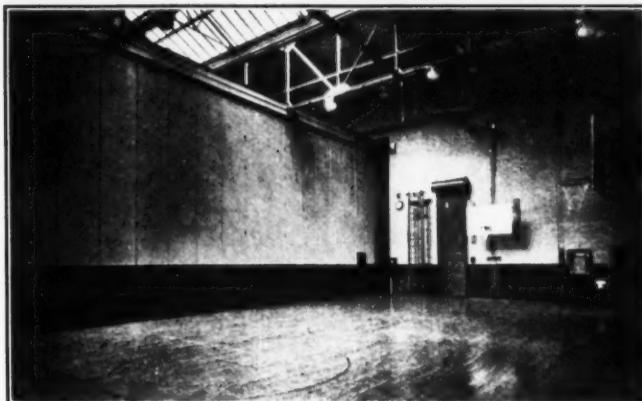


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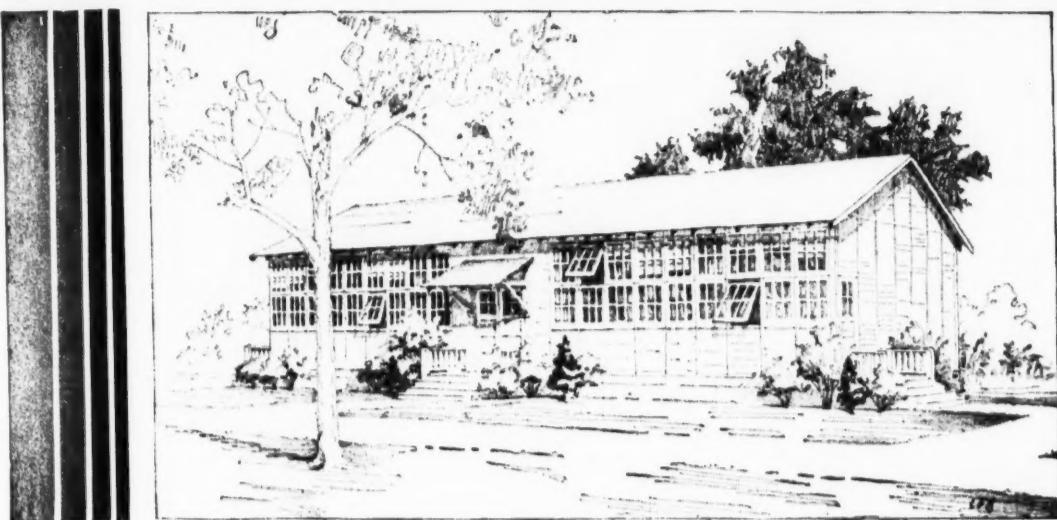
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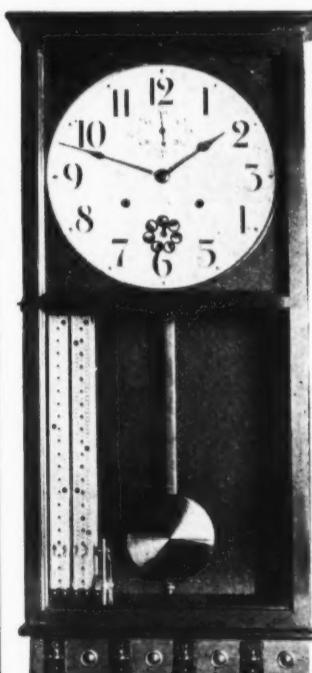
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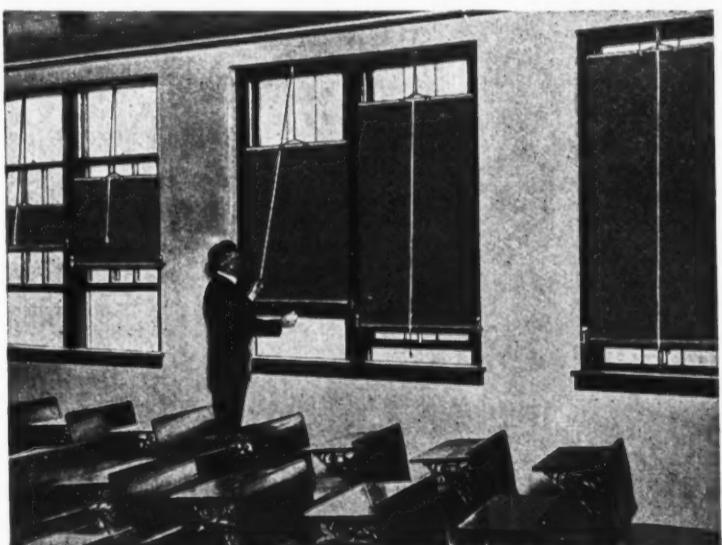


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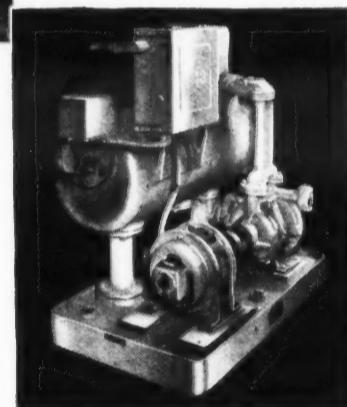
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VOL. 80
No. 5

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The Editor

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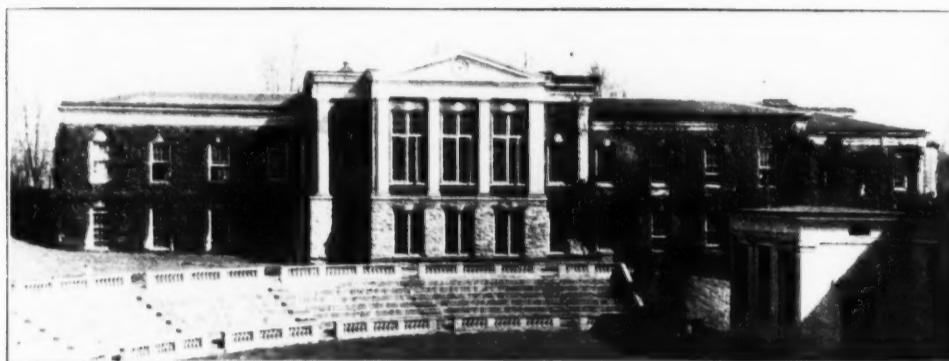
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Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the Education Index.

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THE AMERICAN School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume 80, No. 5

MAY, 1930

Subscription, \$3.00 the Year



FIRST FRUITS OF EDUCATION — SIMPLICITY AND GOOD TASTE

Semiannual Promotions

Dr. W. C. McGinnis, Superintendent of Schools, Perth Amboy, New Jersey

I have no data regarding the number of city school systems that have the semiannual promotion form of organization. A report of a city school survey by the division of field studies of Teachers College, Columbia University, states that most of the city school systems of the United States have the semiannual plan of organization. Among the many large city systems that have the semiannual plan are New York, Philadelphia, Washington, and Detroit. It is probable that most of the large cities, as well as most of the cities, are included in the number that operate the school system under the semiannual promotion plan. Complete and correct data regarding the number or per cent of city school systems that use the semiannual plan would be interesting. These data would depict present practice, but they would be of little value in themselves in determining what is good practice. All too often investigators of educational administration or supervision find out through research what is common or most frequent practice, and then reach the conclusion that the most frequent practice is best practice. Administrative procedure is probably less readily changed in large school systems than in the smaller systems. Among the cities not using the semiannual plan are Boston and practically all other New England cities, and such cities as Atlantic City, East Orange, Montclair, and Trenton.

Advantages of the Semiannual Plan

The proponents of the semiannual plan of organization use several arguments in support of that plan. These arguments vary in number and kind, but there is one argument which is used by all. They state that the semiannual plan is better than the annual promotion plan of organization, because under it a pupil who is not promoted loses only a half year of school life, while under the annual plan he loses a whole year.

Newark, New Jersey, adopted the semiannual plan in 1896, and was by no means the first city to do so. Thirty-five years ago the only method of classification and reclassification of pupils was by nonpromotion and double promotion. Pupils who failed of promotion lost a whole year of school life. The consideration of this fact was the reason — and it was a good reason — for the adoption of the semiannual plan of organization. That reason no longer exists in a school system in which good administrative and supervisory procedure is in operation.

Not Justifiable for Classification

Nonpromotion, or the failure of pupils, is not a justifiable method of pupil classification. It is a crude method. It is no more suited to modern educational administration and supervision than the old-time rural builder's "rule of thumb" method of construction is adapted to the planning and construction of a schoolhouse. Any theory or practice of educational administration that emphasizes pupil failure as a definite policy — as is being done wherever nonpromotion is used as a method of pupil classification — is vicious. The financial cost of teaching repeaters is great, but the social cost is greater. Nonpromotion sends boys and girls into society burdened with a tendency to fail rather than equipped with a capacity to succeed. Educational theory runs somewhat ahead of common educational practice. If this were not so, there would be but little progress. Throughout the United States, university teachers of educational theory oppose nonpromotion as a method of pupil classification. They advocate the 100-percent promotion goal. We must admit, of course, that the degree of universality of a particular

theory is not evidence of its soundness. Theory, as well as practice, must be subjected to careful study and experimentation before the truth or the advantages of either can be safely accepted. The theory that the earth is round had a hard time in supplanting the old, almost universal, belief that the earth is flat. Adaptation of the course of study to the needs and the abilities of the pupils, rather than retardation, is sound administrative procedure. Enrichment, rather than acceleration, is likewise the proper answer in many cases. Dr. Paul R. Mort's dictum that "every pupil has a right to twelve years of schooling on his own level" is worthy of universal consideration and of almost universal acceptance. The faithful pupil of less than average ability should not be penalized by nonpromotion. It is the job of the school to adapt itself to the needs and the ability of the pupil, rather than to give first consideration to a set administrative procedure.

Semiannual Plan No Longer Practicable

The only real, honest-to-goodness reason for having the semiannual promotion plan no longer exists. The plan has outlived its usefulness and should be abandoned.

Two other rather prominent arguments in favor of semiannual promotions are: (1) it provides greater flexibility in promoting pupils and aids acceleration of bright pupils who should be accelerated, and (2) it provides greater flexibility of class organization. All of the advantages claimed for the semiannual plan can just as easily be obtained without it. The absence of the semiannual plan doesn't mean the presence of a rigid annual promotion plan. A pupil should be promoted at any time when it is to his advantage to be promoted. The great group of normal pupils would go along together by annual promotions, but there should be constant adjustments to individual needs.

The claim of greater flexibility in promotions is unsound. Rigidity and flexibility do not go together. The semiannual promotion plan makes for uniformity of promotion, as well as uniformity of nonpromotion by establishing definite promotion and failure dates in the school calendar. I recently made a limited investigation of promotion practice in 32 city school systems having the semiannual promotion organization. In 30 of them, promotions are made only as mass promotions, and are made twice a year. In only two of the cities are individual pupils promoted whenever it is to their advantage to be promoted.

Semiannual Promotion Tends to Increase Retardation

Acceleration in the secondary school should be a matter of the accumulation of credits, begun in the junior-high-school grades. The semiannual promotion organization does not tend to the acceleration of brighter pupils, but it actually tends to increase retardation. The report

of a 1929 survey of a city school system by the division of field studies of Teachers College, Columbia University, gives the following information: "Number of pupils, between 8,000 and 9,000; per cent of pupils in high-school senior class who took less than 8 half years for graduation, 0; per cent who took more than 8 half years, 9; number of pupils of high-school age enrolled in grades below the high school, 300."

The school system has semiannual promotions. The fact that pupils who are not promoted lose only half a year under the semiannual promotion plan is one of the reasons why teachers withhold promotions from border-line pupils. That conclusion is reached on the authority of teachers themselves.

Objections to Semiannual Plan

One of the chief objections to the semiannual promotion plan is that it necessitates a complete reorganization of classes, and a consequent loss of time in the middle of the year. A second objection to the semiannual plan is that under it, teachers and pupils have to go through the process of getting acquainted twice a year instead of once. The clerical-record work is doubled under the semiannual plan without any added benefits.

The claim that semiannual promotions make for greater flexibility of class organization is difficult to sustain. As a matter of fact, it hinders flexibility of organization, in that it results in a necessity for small classes in many school systems in both the elementary grades and in high school. For instance, the 12A and 12B classes in several subjects in high schools are each so small that the A's and B's could be put together were it not for the fact that they are separated by a half year of study. Because of the small classes under the semiannual promotion and graduation plan, the New Jersey State Teachers' College at Trenton, New Jersey, is to abandon that plan of organization. The teachers, supervisors, and principals of Perth Amboy have just voted almost three to one to abolish the semiannual plan.

Even the most ardent proponents of departmental teaching in the elementary and junior-high-school grades admit that one serious disadvantage is found in the fact that it is difficult for the teacher who teaches several different groups of pupils to know the pupils individually and to understand their individual abilities, aptitudes, and attitudes. To teach children is more important than to teach subjects. It is important that the teachers know her subject, but it is essential that she know her pupils. Departmental teaching and individualized instruction adapted to the needs of the pupils cannot function properly in a school organized under the semiannual-promotion organization plan. Departmental teaching under the semiannual plan does not allow time for the teacher to know her pupils well before they must move on and be confronted with another series of new adjustments.

The semiannual plan does not go well with homogeneous grouping. Whether or not the advantages of homogeneous grouping outweigh its disadvantages need not be discussed here. It is sufficient to note that homogeneous grouping is extensively used. Except in very large schools, the semiannual plan by dividing grades into half-year sections makes the number of pupils in the A and B grades too small for homogeneous grouping.

The semiannual promotion plan of organization has served its purpose. It is no longer an aid, but it is a positive hindrance to efficient administration. It is as out of date as the A B C method of teaching reading. Let it pass.



What Is Efficient School-Business Administration?

Classification of School Systems According to the Excellence and Adequacy of Their Programs of Business Administration

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The improvement of business management in public-school systems is being earnestly sought. That a constructive advance has been made in this field during the past two decades is not to be denied. That more widespread and significant improvement may be achieved is also not open to question. The fundamental bearing of efficient and successful business management upon public support for public education should stimulate progress in all aspects of this work. Accounting for funds, determining unit costs, building budgets, insuring buildings, developing maintenance and operating programs, accounting for property, and all other work of business management call for business skill and administrative thoroughness which should be made available to every school system.

The widespread interest in this field is evident in the current professional periodical, as well as book, literature. Comprehensive texts on school-business administration have appeared. Special studies on safeguarding school funds, insuring school buildings, issuing school bonds, planning equipment budgets, and the like, are being issued from the press in significant numbers. Each issue of any journal on educational administration carries thoughtful and helpful articles on special business problems. Each survey of a school system may have a chapter or two suggesting ways and means of obtaining better business management. The sum total of these efforts will result in definite improvements in those school systems where the administration is seeking guidance, and where time is available for analysis and correction. The process of betterment could, however, be speeded up most significantly if analysis and classification on a statewide basis were attempted.

The Competitive Element in Business Management

The local school administrations of a state would profit if the competitive element utilized in the scholastic, musical, and athletic contests of school children were applied to the general nature and character of their business management. A competition to discover which school system produces the most worth-while budget, which local administration shows the most comprehensive financial statements, or which local staff develops the most defensible program of building insurance, would tend to stimulate interest in neglected or undeveloped areas. State departments, or other state educational groups, might even group the local school-business administrations in a series of classes signifying the varying characters of their entire work. A local school system whose business management is placed in a low classification would have an incentive for studying its own case and for improving its methods. State-wide surveys have shown that unnecessarily wide variations exist in local business practices, and that many school systems use antiquated, ill-advised, or even unbusinesslike methods. There can be no defense for a school system using methods long discarded by the business world. Local improvement in business practices will result in a more intelligent use of school funds, which will have a helpful influence upon the productive phases of public education.

Classification of School Systems According to Character of Business Practices

The four cases cited below indicate the possibilities in classifying school systems according

to the manner in which their business work is done. The cases have been chosen from many included in a survey of school systems in one state. The cases represent a cross section of business organization and business practice in that state. It will be noted that Case No. 1 typifies those communities which have organized their business administration of schools on the same excellent plane on which the affairs of corporations doing a like amount of business are organized. From Case No. 1 to Case No. 4 one finds a gradual decrease in business efficiency, until in school systems similar to Case No. 4, such poor business practices are found as to warrant severe condemnation. In other words, the variation in business practice in the state is exceedingly great.

There has been no effort in the presentation of these cases to develop a scientific scale or rating. Such a device would, however, be exceedingly helpful. A study of these cases shows wide differences in organization, in budgeting, in accounting, in safeguarding documents and funds, in planning building programs, in insuring school buildings, in buying supplies, in payroll practices, and other functions of business management. Complete standardization may not be desirable or feasible. Conformity which results in complete and accurate information, in securing the highest educational returns for the dollar spent, and in preventing financial losses through unwise expenditure or inadequate controls should, however, be the aim in all states.

Four School Systems Ranked According to the Character of Their Business Practices

Case No. 1 shows rather uniformly excellent practices.

Case No. 2 has many excellent but some very unsatisfactory practices.

Case No. 3 can improve effectively many of its practices.

Case No. 4 lacks good management and would have difficulty in justifying most of its practices.

Case No. 1

This school district includes a great deal of the territory outside of the city limits. The organization is of the unit type, with executives responsible to the superintendent in charge of buildings, accounting, and purchasing. There are board committees for finance, building, and teachers. The board has not reduced its policies, in regard to the conduct of the system, to the form of printed rules and regulations.

The administrative offices, equipment, and records are evidences of a high standard of executive control. The minute book, however, could be improved by substitution of a loose-leaf book with special pages for reports. Minutes are sent out to board members.

The type of income control exercised insures adequate receipts to the school system as need arises. The depository, selected on a competitive basis, furnishes ample security for school funds on deposit and gives a fair rate of interest. No borrowing for current expenditures is necessary.

The system of financial accounting is complete, and insures not only adequate data for cost accounting, but excellent safeguards for finances. Budgetary control is set up in the detailed monthly reports to the board. The annual financial statement in the form of a balance sheet is quite extensive. Original costs of building and sites are carried in the general ledger.

The budget, prepared by the superintendent, the chairman of the building committee, and the business executive, shows income and expenditures for

the past two years, by months, with estimated income and expenditures by months, for the coming year. Although the form of the budget is not standard, it includes several summaries and tabulations.

Payroll procedure is excellent. The principals combine the monthly time sheet and payroll sheet, and the records are checked as authorization for the monthly salary warrants. The administration could be improved by the use of payroll devices and the establishment of a separate payroll account at the bank.

Financial safeguards are in accordance with the best theory, both for bonding and for auditing. Supply administration shows evidence of careful planning to achieve the best in materials with a minimum of waste. Purchasing, requisitioning, delivering, and accounting procedures are thoroughly efficient.

The administration of maintenance and operation is on a definite program. The system of records insures good accounting and avoidance of waste in materials and services. The duties of the janitorial staff should be summarized in written lists of instructions.

The board has evidently been carrying on an extended building program. The studies of population trends and residential expansion to support such a program on a scientific basis are, however, lacking. Building standards have been maintained through the employment of a consultant architect and a building supervisor. The equipment for new buildings does not seem to have been given the same amount of consideration as the actual construction.

Bonded indebtedness, although up to the constitutional limit, is on a firm basis, as evidenced by the results secured in the sale of local school bonds. The system of records is complete. All issues are standard in term and type.

A few small children are transported to one school. The board owns its bus and employs the driver. Transportation cost accounting has been neglected, however, and expenditures charged to other departments using the bus.

Property protection is afforded through 80 per cent co-insurance, with annual inspections for fire hazards. Fire, tornado, and boiler insurance policies are carried, all listed in an insurance register.

Case No. 2 Employs Some Less Satisfactory Practices

This school district is located in a growing city, and has expanded to include a great deal of territory outside the city limits. Board committees for finance, building, and teachers are selected. The organization is the unit type, the superintendent being the chief executive officer of the board. The secretary of the board is also superintendent of building and grounds; this combination confuses the flow of authority. The organization system is not definite, as there are no printed rules and regulations outlining powers and duties.

The administrative offices are well arranged and equipped. Protection of records in the superintendent's office is not complete, however, as there is no vault or safe there. The minute book is standard in form, but procedures tending to routinize and expedite board business are not in evidence.

Provisions of income control indicate that financial needs of the district have been analyzed and properly met, with a minimum of expense to the local taxpayers.

Unnecessary duplication of effort is seen in the accounting system, as the secretary of the board and the superintendent's secretary keep ledgers for the same expenditures. Uniform accounting classification would be valuable to this district, in comparing local unit costs with costs for similar communities, on the same basis. The annual financial statement does not present a complete picture of the financial status of the district. A property ledger is in use, but does not form the basis for maintenance budget estimates.

The budget as submitted by the superintendent provides no basis for considering the recommenda-

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tions. Payroll records should be supplemented by a monthly time report, a payroll ledger, and a monthly payroll sheet. The time required to perform this phase of business administration could be lessened materially through the use of payroll devices.

Only one of the three officials who should be bonded has been required to submit a bond. This bond is backed by two personal sureties. Auditing is sometimes done by an outside auditing company, and annually by a board committee.

The purchasing of supplies is excellent, but the time should be shifted from the fall to the spring. Supplies records should be improved, and standardization of items effected.

Maintenance and operation show evidence of systematic planning and oversight. Maintenance records and costs are well kept. Written instructions to janitors should be issued to standardize job procedures and prevent waste material and effort.

The district has planned to take care of the building needs as set forth in a recent survey. All supplemental studies essential to developing a building program are at hand. The board uses standard procedures in carrying through a building operation.

The local bonded indebtedness situation is good. Adequate records are kept. Premiums are secured on bond issues, and the average rate of interest is but 4½ per cent. The amount of indebtedness is average, about 3 per cent of the assessed valuation. The type of bond issue, however, should be changed, as most issues are a combination of straight and serial, payments being made every five or ten years. This makes it difficult to insure equal annual payments and forces the creation of a sinking fund.

Insurance is of the flat type, about 40 per cent of value. It is 5-year term. Annual inspections are made for fire hazards. Boiler and tornado insurance are carried in addition to fire insurance. Insurance records are complete.

Case No. 3 Can Improve Its Practices

This is one of the larger school districts in the state. The board of education exercises special control over business administration through various committees; in the case of educational policy, it acts as a group. Executive control is divided in the multiple organization among the superintendent, the part-time secretary purchasing agent, and the custodian of buildings.

The minute book is poorly organized: a large bound book, written in longhand, no paragraphs for motions, names of members voting for or against not included, no indexes. There is a recent revision of the printed rules and regulations, complete, but not definite in tracing the line of authority. No docket or minutes are sent to board members. The secretary makes an annual report to the board.

The school tax is low. The depository is selected on a competitive basis, with a bond required; 3 per cent interest is paid on daily bank balances. Short-term loans are unnecessary, as a sufficiently large surplus is carried.

The secretary keeps expenditure distribution ledgers in the form of warrant registers — one for each of the funds, and a distribution ledger by buildings. The treasurer keeps the control ledger of general receipts and disbursements. No voucher system is used. Warrant checks are sent out for all payments.

No budgetary control is maintained other than reports made to the board every three months. The treasurer reports monthly on receipts and disbursements, with bank balances.



A PRIMARY CLASS AT BRONXVILLE, NEW YORK

The primary class illustrated in the above picture was taken recently with the cooperation of Supt. W. W. Beatty of the Bronxville Public Schools, and is part of a talking film prepared under the direction of Mr. V. C. Arnsperger, director of educational research for Electrical Research Products, Inc. The picture is intended not only for public information, but also for teacher-training purposes.

The annual financial statement is not adequately itemized, as only total disbursements under each fund are shown. The condition of the sinking fund is not reported separately, only the balance being indicated. Bonded indebtedness is not reported.

The budget, as prepared by the superintendent, deals only with estimated receipts and current expense disbursements.

Payroll procedure in general conforms to standards. The excellent forms in use might be supplemented by a monthly payroll sheet, and a payroll calculator would save time in preparing salary warrants.

The treasurer's bond is adequate in amount, but is the undesirable personal surety type. There is no audit other than that of the board committee.

No standardization of supply items has been done. Supply estimates, except for textbooks, are made by the secretary of the board. Purchasing is efficiently done, but requisition of supplies occurs every week. Records of supplies are inadequate, although the cost accounting of supplies per building is maintained.

The maintenance program is well organized and staffed. Cost accounting is facilitated through the use of job orders and the posting of expenditures by buildings. Janitors are required to assist in maintenance as well as in operation work.

There is no program of building. Scientific studies of population trends and residential developments should be made to determine site locations and building needs for the future.

The school-bond indebtedness is average, about 3 per cent of the assessed valuation. The type and term of the single bond issue conform to the best standards.

The insurance is the flat type, blanket form, annual term. Had 80 per cent co-insurance been carried, the board would have received a much greater indemnity for the two buildings which have burned in the past ten years. A 5-year term for policies would result in lower rates.

Case No. 4 Lacks Good Management

This school district has consolidated with several neighboring rural districts; two buildings are maintained, one a combination elementary-and-high school, the other an outlying rural school.

The organization is essentially unit type, although the superintendent is assisted by board officers in some of the executive functions. There are board committees for finance, buildings, and supplies. The outline of organization and placement of responsibility are not clear, as there are no written rules and regulations to indicate board policy in this respect.

The superintendent's office in the high-school

building is small and not easily accessible. The board meets at the treasurer's place of business. Protection of records is inadequate. The minute book, in form and content, reveals lack of secretarial efficiency.

The school-tax rate is high, with almost as much levied for the sinking and interest funds as for the teachers' fund; the bonded indebtedness, however, is comparatively low. Borrowing for current expense has not been necessary, because of the reserve balance carried and the practice of interfund transfer. The depository is not bonded for school deposits, nor does it pay interest on such deposits.

Financial accounting books consist of a warrant register and a receipts ledger, set up and posted by the treasurer. The budget is prepared by the superintendent, secretary, and the treasurer. Cost data for the budget are not readily accessible to the superintendent who usually

indicates only the services and materials needed for the coming year.

Salary warrants are made out monthly by the secretary from an annual payroll sheet. No deductions are made, each teacher paying the substitute employed. Teachers are required to call at the secretary's place of business for salary warrants. No payroll forms are used, except the salary warrant, the annual payroll sheet, and the warrant register.

The treasurer is bonded by a surety bonding company. No audit is made other than that of the board committee.

Analysis of supply administration shows the following weaknesses: no standardization, supplies bought on the open market, irregular requisitions, and no supply accounting.

Maintenance is in charge of a board committee which determines annually the repairs necessary. No records are available. Operation service is limited owing to the type of janitor personnel. Purchase of fuel is efficient.

The superintendent is the moving force in building activities. Present buildings present evidence of the lack of a program on the part of the board.

The amount of bonded indebtedness is comparatively low; the term and type of issue are excellent. No records, such as the bond register, are kept.

A few pupils are transported from a rural school closed after consolidation. The board has set no standards for transportation service.

Insurance is of the flat type, about 50 per cent of plant value. Co-insurance would enable the board to secure greater protection for a slightly greater cost. The policies constitute the only records.

Teacher Certification

Raising of certification requirements among the states is one of the outstanding tendencies of the biennium, 1926-28, according to the U. S. Office of Education. A movement toward the centralization of the power of certification directly into the hands of the state, instead of allowing such power to remain in the hands of local districts, counties, and cities, has been proceeding for many years. Thirty years ago only three states issued and controlled all teachers' certificates. In 1926, a total of 26 state departments exercised such powers. Certification on the basis of examination continues to decrease, while certification on the basis of institutional training continues to increase. At present, all states grant one or more certificates primarily on the basis of professional training. Many of the states give little or no recognition to certificates outside their boundaries.

The Duties of Public-School Administrators—XI

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SUMMARY AND CONCLUSIONS

The present paper concludes a series of articles, which has been devoted to a consideration of the duties of public-school administrators. The data upon which the preceding articles have been based were secured from a study of the administrative duties performed by 473 principals and superintendents scattered in various parts of the United States. The study of administrative duties was based upon a carefully prepared checking list of 1,000 administrative duties, so organized as to cover the field thoroughly and systematically. The study extended over a year's work of the 473 administrators included. With certain minor exceptions, the 1,000 administrative duties have been treated in the preceding articles in the same general order as they appeared in the original checking list where they were classified in the following manner:

1. General Control	101	duties
2. Executive Management.....	169	duties
3. Business Management.....	153	duties
4. The Teaching Staff.....	86	duties
5. The Pupils.....	120	duties
6. The Curriculum.....	70	duties
7. Special Activities.....	79	duties
8. Instruction	106	duties
9. Special Services	116	duties

The 1,000 executive duties which fall into the nine fields of administrative service indicated above have been treated in previous articles with respect to the percentages of superintendents, general principals, high-school principals, and elementary-school principals respectively who performed each duty; with respect to the median frequency with which each duty was performed by superintendents; and with respect to the median administrative value which was attached to each duty by 50 competent judges. It is the purpose of this, the final article of the series, to call attention to certain summary features and conclusions, which become apparent when all of the preceding details are brought together for general consideration.

1. Variation in the Values Attached to Administrative Duties

Owing to the fact that public-school administrators find that it is impossible to perform in person all of the administrative duties which present themselves, it is a matter of importance to ascertain the different value of the various possible duties. Fifty judges were called upon in the present study to assign values to each of the 1,000 administrative duties. Values were assigned according to administrative importance of the various duties when performed by the superintendent of schools. A duty was given a value of "1" when judged to be of primary administrative importance; a value of "2" when judged to be of average importance; a value of "3" when judged to be of minor importance; and a value of "0" when judged to be of no importance.

The median value which was attached to each of the 1,000 administrative duties has been indicated and certain features of the variations in values among the different duties have been pointed out in the preceding articles. Table XLVII is now presented as a general summary of the different values of administrative duties, as they appear in the various major and subordinate types of administrative service.

TABLE XLVII. The Administrative Values of Various Types of Duties Performed by Public-School Superintendents. (The figures indicate the number of duties of each type and value.)

TYPES OF DUTIES	Values of Duties		
	1	2	3
I. General Control			
1. Coöperation with Board	18	7	4
2. Administrative Organization	13	9	0
3. Coöperative Agencies	5	8	3
4. Survey, Appraisal, and Publicity.....	7	12	15
Total	43	36	22

II. Executive Management							
1. Major Office Management and Routine	10	13	0	0			
2. Minor Office Management and Routine	0	0	15	11			
3. Relations with Parents	10	15	3	0			
4. Church and Special	0	3	13	2			
5. Civic Activities	1	7	8	1			
6. Miscellaneous	12	8	9	0			
Total	33	46	48	14			
III. Business Management							
1. Fiscal Management	12	6	1	0			
2. Payroll and Cash Accounting	2	7	7	4			
3. Inspection and Care of School Plant	3	9	10	6			
4. Purchase of Supplies and Equipment	7	14	3	1			
5. Construction and Repair	5	14	4	1			
6. Supervision of Janitorial Service	7	8	5	0			
7. Building Program and Surveys	15	3	0	0			
Total	51	61	30	11			
IV. The Teaching Staff							
1. Employment of Teachers	22	11	3	0			
2. Personal Welfare of Teachers	11	15	5	0			
3. Professional Improvement	7	9	3	0			
4. Status and Welfare of Executives	15	9	4	0			
Total	55	44	15	0			
V. The Pupils							
1. Census and Attendance	13	14	10	1			
2. Promotion and Progress	7	10	3	0			
3. Classification of Pupils	8	7	2	1			
4. Reports and Records	5	8	7	2			
5. The Discipline of Pupils	6	14	2	0			
Total	39	53	24	4			
VI. The Curriculum							
1. Aims and Adaptability	6	8	4	0			
2. Extension	2	1	4	0			
3. Textbooks	5	12	0	0			
4. Schedule Management	9	4	0	0			
5. Curriculum Building	17	25	8	0			
Total	37	25	8	0			
VII. Special Activities							
1. Student Organization and Social Activities	1	13	11	0			
2. Athletic Activities	1	7	6	33			
3. Assemblies	2	10	10	2			
4. School Publications	2	5	4	7			
5. Graduation Program	6	35	31	7			
Total	6	35	31	7			
VIII. Instruction							
1. Teaching and Classroom Management	0	5	10	3			
2. Administration of Tests	10	10	4	1			
3. Interpretation of Tests	8	5	1	0			
4. Personnel Supervision	18	2	0	0			
5. Classroom Supervision	6	22	1	0			
Total	42	44	16	4			
IX. Special Services							
1. Special Health Service	2	9	9	3			
2. Cooperation with Health Officers	3	7	4	1			
3. Library Services	2	7	3	2			
4. Guidance	6	11	7	0			
5. Transportation of Pupils	9	2	2	4			
6. Playground, Lunch, and Miscellaneous	1	5	14	3			
Total	23	41	39	13			

Duties of primary importance are given a value of 1; those of average importance, 2; those of minor importance, 3; and those of no importance, 0.

The outstanding fact disclosed in Table XLVII is the great and widespread variation in the values of the duties which are performed by public-school superintendents. Almost without exception, this variation is found in all types of administrative service. It is most pronounced in the general fields of executive management, special activities, and special services. In these three fields, duties of primary, average, little, and no administrative importance are performed somewhat indiscriminately. In contrast to this, the three fields of general control, personnel management, and the curriculum are characterized by the performance of comparatively large numbers of primary duties, and the total absence of performance of duties with no administrative value.

Table XLVII is worthy of detailed study on the part of public-school superintendents. Are they giving sufficient attention to the types of administrative service which contain the greatest number of important duties? Are they giving too great attention to the types of service such, for example, as minor office management and routine, which contain duties exclusively of minor or no administrative importance? In making final readjustments in the selection of appropriate administrative duties to be performed, it is necessary to consider individual

duties within each type of service, but for such details the reader must turn to previous articles.

That the 1,000 duties as a group tend generally toward the important, rather than toward the valueless duties, is indicated by the following general summary:

The number of duties of primary importance.... 329
The number of duties of average importance.... 385
The number of duties of minor importance.... 233
The number of duties of no importance.... 53

Finally, it should be noted that for a considerable number of the 1,000 administrative duties the 50 judges were themselves in marked disagreement as to the respective intrinsic administrative values. Part of this disagreement was due to differences in opinion as to whether the superintendent of schools was the appropriate school officer to perform the duties in question; part was due to the uncertain nature of the purposes and outcomes commonly attached to certain administrative duties; and part was due to genuine differences of opinion among the judges as to the actual educational value of certain administrative devices. On the whole, there was a surprisingly large number of administrative duties concerning the administrative values of which the 50 judges were in practical unanimity of opinion (See previous Tables.)

2. Frequency of Performance

The frequency with which a duty is performed is a matter of great vocational significance. Duties which are performed at frequent intervals tend to become standardized and reduced to more or less habitual procedure. Duties of this type seldom require a high degree of administrative ability to perform. Some light, therefore, is thrown on the work of public-school superintendents when we note the relative number of duties which they perform over brief intervals in contrast to the duties which they perform over extended intervals. This contrast is revealed in the figures presented in summary form in Table XLVIII. Table XLVIII shows how many of the 1,000 duties which make up the work of public-school administrators are performed respectively by superintendents on a daily, a weekly, a monthly, and a yearly basis.

TYPES OF DUTIES	Number of Duties Performed			
	Daily	Weekly	Monthly	Yearly
1. General Control	0	0	27	74
2. Executive Management	18	22	30	71
3. Business Management	0	4	39	110
4. The Teaching Staff	0	4	17	93
5. The Pupils	3	4	21	92
6. The Curriculum	0	0	2	68
7. Special Activities	0	0	20	59
8. Instruction	1	7	35	63
9. Special Services	0	6	23	87
Total	22	47	214	717

The figures given represent the median performance in each case of all superintendents who performed the duty in question. In this summary, yearly duties include all semiannual duties, while the remaining duties are classified as they approximate most closely to monthly, weekly, or daily duties.

The evidence presented in Table XLVIII shows that the great bulk of duties performed by public-school superintendents are performed on a yearly basis. Of the total 1,000 administrative duties, 717 were performed during the year of the investigation on an annual (including semiannual) basis. In addition to the 717 annual duties, 214 duties were performed on a monthly basis, 47 on a weekly basis, and 22 on a daily basis. Thus, a total of 93 per cent of the duties were performed on a yearly or monthly basis, and only 7 per cent on a daily or weekly basis. Nearly all of the daily and weekly duties performed by public-school superintendents are connected with office duties in the general fields of executive management.

Three of the general fields of public-school administration — general control, the curriculum, and special activities — contain no duties which are performed on a daily or weekly basis. Generally speaking, as has been shown in previous tables, the values assigned to yearly and monthly duties by the 50 judges are almost uniformly higher than those assigned to daily and weekly duties.

The facts presented in Table XLVIII indicate very clearly that the work of superintendents cannot be reduced to a routine or habitual basis. Over nine tenths of his duties come after intervals of time long enough to necessitate the initiation of new planning and activity. Many of these duties require very extensive planning as well as detailed execution. Unfortunately, as numerous individual records show, many superintendents, confronted with an array of some twenty duties each day and forty-odd duties each week which seemingly need immediate attention, never find time properly to plan and execute the monthly and annual duties which, although of greater ultimate administrative importance, are less pressing in character. Such a situation can only be remedied by preliminary planning and deliberate scheduling of the superintendent's time.

3. Homogeneity of Administrative Work

A very considerable amount of literature has been devoted to the special work of elementary-school and high-school principals as distinguished from that of the superintendent of schools. As a matter of fact, these three offices have come quite generally to be recognized as three separate and fairly distinct factors in the administrative personnel of all but the smallest of school systems. It is somewhat surprising, therefore, but none the less important, to discover in such an extensive survey of the work of public-school administrators that there is a high degree of similarity in the work of the elementary-school principal, the high-school principal, and the superintendent of schools. The many tables which have been presented in the preceding articles show that the great majority of the administrative duties performed by the superintendent of schools are also performed by the high-school and elementary-school principals. Superintendents as individuals usually perform a wider array of duties than do either high-school or elementary-school principals, the superintendent each year on the average performing 46 per cent of the 1,000 administrative duties, as contrasted with an average performance of 39 per cent by the high-school principal and 35 per cent by the elementary-school principal, but practically all of the duties performed by superintendents are also performed somewhere by large numbers of high-school and elementary-school principals. Moreover, the duties which are most commonly performed by principals are also very commonly performed by superintendents.

In calling attention to the fact of the general similarity which exists in the work of the several groups of public-school administrators, the related fact should not be lost sight of that certain duties are characteristic of the work of one administrator rather than of all. For example, the duties pertaining to executive coöperation with the board of education are quite generally attached to the work of the superintendent of schools rather than to that of the principal. Nevertheless, even in this field, the 29 duties pertaining to executive coöperation with the board were performed on the average by half as many principals as by superintendents. There is a surprisingly large number of duties, such as *Initiate new teacher*, *Organize professional library*, and *Construct list of general educational objectives*, which are practically common to all three groups of officers.

The general extent of the overlap which exists in the character of the work of the several

different administrative officers is well indicated in Table XLIX, which shows the relative percentages of the duties performed by superintendents on the average in the nine general divisions of public-school administration which were also performed on the average by high-school and by elementary-school principals. For example, the high-school principals performed

TABLE XLIX. Relative Percentages of the Duties Performed by the Average Superintendent That Are Performed by the Average High-School Principal and by the Average Elementary-School Principal

FIELD OF DUTIES PERFORMED BY SUPERINTENDENT	Relative Percentage Performed by Principals	
	By High-School Principal	By Elementary-School Principal
1. General Control.....	73	63
2. Executive Management.....	93	83
3. Business Management.....	66	62
4. The Teaching Staff.....	75	59
5. The Pupils.....	100	92
6. The Curriculum.....	85	62
7. Special Activities.....	103	66
8. Instruction.....	87	89
9. Special Services.....	87	103

73 per cent and the elementary-school principals performed 63 per cent as many of the administrative duties in the field of general control as did the superintendents. In the field of executive management they performed 93 per cent and 83 per cent respectively as many duties as the superintendent. In the field of special activities the high-school principals on the average performed more duties (103 per cent) than the superintendent. Likewise, the elementary principals performed more duties (103 per cent) in the field of special services.

On the basis of these figures it would appear that the training necessary to the principalship and the superintendency should be essentially the same, and that experience received in any one of these positions would be highly useful in each of the others. The general similarity of the work performed by each officer also throws some doubt concerning the necessity of employing three different administrators in small systems.

4. The Factor of Size

Almost nothing has been said in the preceding articles concerning the influence of the size of the school system, or of the building enrollment upon the duties which the administrative officers in charge have to perform. This has not been due to lack of space for the full presentation of facts. While no attempt can now be made to cover the factor of size adequately, it seems desirable to make several general statements that are borne out by an analysis of the detailed data pertaining to size.

Speaking generally, it may be said that decreases in the size of a school or of a school system cut down the total number of administrative duties performed by individual school administrators more than it affects the selection of particular duties. That is to say, the principals and superintendents of smaller schools on the average tend to perform fewer administrative duties than do those in charge of larger schools. However, the differences are not specially marked; and the principle of size does not hold for the largest school systems and buildings. In these, very probably due to the presence of assistants, the superintendents and principals perform a somewhat smaller general array of duties than are performed by similar officers in medium-size schools.

A similar situation exists with respect to the amount of teaching done by administrative officers. Generally speaking, the more teaching, the fewer are the number of administrative duties performed. The difference, however, at any level is not great, and a few hours of teaching seems to have little or no effect on the total array of administrative duties attempted. These statements, of course, apply to the number of duties attempted and not to the amount of time spent on them. The studies by Hughes prove that superintendents with heavy teaching loads in small systems devote considerably less time to administrative duties than do superintendents in large systems with light teaching loads.

5. Individual Differences

Finally, attention is called to the fact that very great differences exist in the practices of individual administrators. It has been the purpose of the preceding articles to discuss general tendencies and practices. In every instance the figures given have represented averages based upon large numbers of individual cases, so that a fair picture might be given of the particular field of work being described. As a consequence, no idea, whatever, has been given to the differences which exist in the general selection of administrative duties by different public-school administrators. The large number of duties involved makes it impossible to show these variations here in detail, but an examination of the original data shows that principals and superintendents are widely variant and in many cases apparently ill-advised in the selection of the particular administrative duties which they perform from year to year. Naturally, a very considerable individual variation in the selection of duties might well be expected, but the general lack of balance in the selection of duties and the emphasis placed upon duties of minor value by many administrators has impressed the author as being due either to a lack of foresight in planning, or to a lack of knowledge as to what constitutes a proper program of administrative duties.

While still failing to show detailed duties, something of the variation in the general selection of duties which exists among different superintendents may be seen by an examination of Table L which shows the relative numbers of duties performed by four different small-town superintendents selected at random in the nine major fields of school administration. Superintendent A, for example, performed 49 duties

TABLE L. Variations in the Duties Performed by Different Superintendents

FIELD OF DUTIES PERFORMED	Percentages of Total Possible Duties Performed by Superintendents A, B, C, and D			
	A	B	C	D
1. General Control.....	45	42	48	25
2. Executive Management.....	97	65	95	63
3. Business Management.....	68	47	37	51
4. The Teaching Staff.....	50	41	50	38
5. The Pupils.....	58	28	52	54
6. The Curriculum.....	34	30	27	42
7. Special Activities.....	41	23	28	40
8. Instruction.....	28	33	58	29
9. Special Services.....	78	52	51	36
Total	49	36	45	38

out of every 100, in contrast to the 36 which were performed by Superintendent B. Superintendent A performed 97 per cent of all the duties in the field of executive management, as contrasted with Superintendent D who performed 63 per cent of the duties in the same field. All of the superintendents agreed in giving greatest emphasis to the field of executive management, but each differed in the field of least emphasis. Superintendent A gave least general attention to the field of instruction, performing but 23 per cent of the possible duties; B gave least attention to special activities (23 per cent); C gave least attention to the curriculum (27 per cent); and D gave least attention to general control (25 per cent). Superintendent A gave greater emphasis to executive management (97 per cent) and special services (78 per cent) than any other superintendent did, but gave less emphasis to the field of instruction (28 per cent). Superintendent C, on the contrary, with the exception of executive management, gave more attention to instruction (58 per cent) than to any other field.

Numerous other differences in the general choice of duties are revealed in Table L. These differences would appear more striking if space permitted consideration of minor groups of duties, but enough has been disclosed to indicate the common variation in the range of duties attempted by superintendents in school systems of the same size, and to suggest that there is great need for more careful duty analysis and preliminary administrative planning.

Desirable Principles of Teachers' Salary Schedules¹

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In the administration of public education, we are constantly searching for desirable principles to govern and direct procedures. While it is almost if not quite impossible, to prove conclusively anything in the field of social or educational service, nevertheless, the necessity of the situation demands that we do something, and that we do it in accordance with what for the moment appears to be the most desirable principles from the viewpoint of public policy. We are required to judge even where we cannot measure, and most of our practices must be determined by judgment rather than by exact measurements.

Generally speaking, there are a number of well-defined stages in the evolution of an educational policy. The growth of the idea of salary schedules during the past fifty years afford us an excellent illustration. The stages are: (1) the feeling of a need; (2) the general discussion or defining of this need; (3) the assembling of data bearing on a solution of this need; (4) the interpretation of these data; (5) the formulation of a tentative plan; (6) the trial of the tentative plan; (7) the revision of the plan in light of new evidence discovered by tentatively trying it, and (8) the final definition and adoption of the policy. By such a procedure we arrive at desirable policies. But our so-called final policy is final in a relative sense only. Society is not a static thing but a dynamic and creative organism. Consequently, educational policies must be continuously reappraised and reformulated to keep abreast of the reconstruction constantly going on in the educational organism.

The Spoils System and Teachers

The employment and payment of public employees is an illustration of this method of policy making. We have proceeded to refine our methods slowly and have not reached as yet a very well-defined and carefully established plan. It is a very difficult problem fraught as it is with many conditions and circumstances that do not have much, if any, weight in privately controlled enterprises. All phases of public personnel administration are peculiarly and dangerously responsive to personnel, charitable, religious, social, and political influences. This is so evident that many public administrators cast overboard nearly all principles except the "law of the situation," or expediency and opportunism. By the "law of the situation" we mean the settlement of a problem not by the application of an abstract principle, but in accordance with its own peculiar and individual conditions.

Less than fifty years ago educational personnel was paid in accordance with the political practices that prevailed in the payment of other public employees. Pay-what-you-had-to, get-what-you-could-get, "every man for himself, let the devil take the hindmost," and "to the victor belong the spoils" were the slogans indicating the philosophy that prevailed in those days. These practices continued down to the end of the nineteenth century and, indeed, have not entirely disappeared even today.

In 1881, Garfield was assassinated by a disappointed office seeker. This crystallized a slowly developing public sentiment into a demand that legislation be enacted to curb the baneful effects of the spoils system. Hence, the Pendleton Act was passed. This Act is the basis of our national and local civil service policy today. Slowly during the past fifty years the principles of the civil service have evolved. But not without stubborn opposition at every step;

¹Except for a few minor omissions, the present paper constituted an address before a group meeting on personnel and salary problems at the convention of the Department of Superintendence, Atlantic City, February 25, 1930.

and it is by no means an accomplished fact in the majority of our local governments today. Spoils still reigns and spreads its dark mantle over public educational administration as it does over other forms of public management. It is held in check by a rapidly growing enlightened public opinion that may in time entirely destroy its baneful influence.

Spoils System Still Prevails

I cite this brief historical account as a background for my treatment of the desirable principles of salary schedules for school employees, for the reason that the principle of spoils has been widely employed in the management of education personnel. We must remember that public education is still largely a local affair in the United States, and that its development parallels the development of Triumphal Democracy. A stream does not rise higher than its source. Naturally, the ideals and practices of public educational administration are of a necessity very similar to the ideals and practices that prevail in the employment and payment of other public employees. Much as we deplore it, nevertheless, it is a cold fact with which we as practical administrators must deal. We must face the realities of the situation.

There was a time not so long ago when teachers were hired, paid, and fired on a spoils basis. Indeed, there are still not a few communities where this is true. Witness the turnover in the office of the county superintendent, the state superintendent, and even the chief officials of our state educational institutions in some of our newer states. Recently it was reported to the writer on good authority that no teacher, principal, or superintendent in a certain county in a near-by state could secure or retain a position in the county without paying annual tribute to the political boss of the county. Who of my hearers has not been cognizant of the silent but none the less potent influence of some party leader exerted upon members of the board? Fortunately, these instances are becoming less and less common as a better public opinion developed and as we get farther away from amateur teachers and amateur administrators in public education.

Salary Schedules and Civil Service

In the larger cities for the most part, control of the salary problem is in the hands of professionalized educators, who propose carefully devised salary schedules. But we need salary schedules in rural and village, and, in fact, I am of the opinion that they are more needed in rural areas than elsewhere. We have tried, and are trying, in some states the principle of a state law for fixing a minimum wage. But at best it is only a halfway measure. It emphasizes only one of several desired features of a salary schedule, and it may tend to depress rather than elevate salaries.

Public employees in other fields are being protected by enlightened civil service laws and regulations. Education needs the same type of protection. I am not advocating that all educational employees be put under civil service management. But I am urging that basic legislation be passed for the protection and betterment of teachers the same as for other public employees. The administration of such legislation should remain in the hands of professionally trained educational leaders. The chief characteristics of civil service are:

1. The provision of a method by which selection is determined on the basis of merit.
2. A probationary period of service.
3. A permanent tenure after the period of

probation, subject only to continued efficiency and loyalty to the service.

4. No obligation to contribute or to solicit funds for political purposes.

5. Definite salary schedule.

6. Protection against disability and old age.

I do not mean to extol the civil service as perfect. I know it is not. But it has done much to relieve public employment of the stigma of spoils, and we still need this protection in education. We see the rapid development in education of all six of these policies, and in many places education has far outrun the civil service in its real achievements along these lines.

Building Salary Schedules

In education are there any desirable principles upon which salary schedules should be built? The writer believes that there are certain general principles that apply throughout the service. The experience of thousands of school officers in all parts of the country during the past century have established these principles in the consciousness of the profession and to some extent in practice.

In the determination of wages in education, three parties must be properly safeguarded: the children, the public, and the teachers. The basic principle is protection of the childhood of the nation against ignorant, uncouth, untrained, unskilled, unhealthy, unprofessionalized amateur teachers. The state has the authority and the solemn obligation to accomplish this. In doing it the state protects the public, the pupil, and the teacher. The amateur must be driven out of the occupation of teaching if it is to be developed into the profession of teaching. This means that state and locality should unite in raising as high as possible the minimum age and training qualifications for certification and for employment.

The curse of the present situation is the horde of licensed amateurs. By amateur I mean a person with minimum training and qualifications who secure for himself a job in teaching, often by dubious methods, and then proceeds to sit down and "roost" or "perch" in this position as long as he can hold on with little or no thought of making it a permanent profession, and, therefore, with little or no interest in his own or the profession's improvement. We have the amateur in both teaching and administrative positions and should combine against him as the doctor and the lawyer have combined against the quack in their zealous campaigns for the improvement of those professions. If the amateur cannot be driven out, he should be allowed to stand still so far as salary is concerned and not advance beyond the minimum until he becomes professionalized.

Again, the profession needs protection against the amateur; against the ruthless operation of the law of supply and demand; against arbitrary and autocratic control; and against the vicious custom of spoils. We cannot hope to see a real profession of teaching so long as these forces remain unchecked.

Still further, service must be safeguarded against stagnation. We do not want job holders, "roosters," "ratters," and "perchers." Salary schedules should be practical incentives to stimulate and compel growth and improvement. The morale of the individual and of the group must be continually heightened.

The Cost-of-Living Index

Still another factor in the situation is the standard of living. Wage scales must bear some ratio to the standard of living or the so-called cost-of-living index. As one rises or falls the other should in time correspond. Of course, this

must be controlled. Wages usually go up last and come down first. But today the evidence shows that, for a time at least, the principle is reversed. Wages in 1920 went up last and have stayed up longest. A new theory is slowly evolving expounded by Ford and others. The theory is: *"Increase wages in order to increase production, in order to increase wages,"* and so on ad infinitum. We are unable to say as yet whether the new theory will replace the old.

In education we have no evidence as yet that wages have materially outrun the cost of living. We sincerely hope that the minimum wage in education will be at least from $1\frac{1}{4}$ to $1\frac{1}{2}$ times the standard-of-living index of common labor. That is, if common labor is paid four dollars a day, the beginning wage of the minimum qualified teacher will be at least five or six dollars per day. In other words, the beginning wage must be high enough to attract desirable people into the profession.

Another principle is that the position should be compensated, rather than the individual. This principle is being adopted in the civil service and in other forms of public employment. Willoughby advocates it for all government employees. He says: "First, the principle should be adopted of compensating the position rather than the individual. Unless this principle is firmly established, confusion in salary rates and inequalities in salaries paid will tend steadily to become greater and greater as time goes on."

This principle, although not fully established, is rapidly becoming recognized in public education. In a college, for example, the positions are graded upward from assistant, to instructor, to assistant professor, associate professor and full professor, to head of a department, to director or dean; and a schedule of salaries arranged to correspond. The position is paid either a fixed or a variable amount. Thus, a career offers itself in college teaching. There should likewise be a career in elementary- and high-school teaching.

The Beginner's Salary

In practice, we may pay a given position either a flat rate or a graduated rate. If a flat rate is paid, the beginner receives as much as he will ever get in that position. If he desires an increase in salary he must advance to a more important and higher-paid position. If a graduated rate is paid, the beginner starts at a specified minimum and is advanced according to his advance in attainment or the increasing demands of the position.

For the beginner to have to change to a more important position is manifestly unfair as there are many positions in education where it is not feasible or desirable that the worker must be made to shift in order to advance in salary. In public schools a few years ago it was customary to pay a lower-grade teacher a certain salary, and advance her in salary as she advanced in the grades, paying for the high-school grades considerable more than for the lower grades. The lower grades were the training places for the amateurs. This custom still prevails in a few places. It is a hangover from the old order that unconsciously established a hierarchy and an aristocracy of positions by thus scaling the wages upward. The difference in required training was undoubtedly in part the cause of the difference in salary.

We once thought that anyone could teach in the lower grades who could read and keep order, but it took brains to teach in a high school or college. We are beginning to realize that it takes at least as much training, although perhaps a different kind, and as great skill, to teach in the grades as it does elsewhere. With this realization we are shifting our basis to recognizing all classroom teaching positions whether in the first, the twelfth, or any of the intervening grades as approximately equal in their requirements and demands upon the teacher.

Salaries for the Career Motive

Naturally, a person in a given position is interested in the possibility of a career in that position. Now, it is evident that a person should become more valuable in a given position the longer he holds that position. There is an acknowledged injustice in paying a beginning teacher a wage the equal of that paid to a teacher who has been in the service for many years. And yet that is just what we now do in many instances outside of cities. A recent study of the salaries paid county teachers in Ohio show that the range in elementary schools was in the ratio of 1 to 1.3 and in high school 1 to 1.2. That is, the people of long service were getting only $\frac{2}{10}$ or $\frac{3}{10}$ more than beginners were being paid. In this, Ohio is not peculiar. The same conditions exist in Oklahoma, Georgia, Kansas, and other states. In fact, I have heard boards of education advocate a flat wage for all teachers regardless of grade or subject, sex, training, experience, or merit. Union labor urges this principle. But in education we are rapidly getting away from such a rule. Since education must be individualized, the deadly law of uniformity must be checked; otherwise, teaching will be paid on the basis of common labor.

It is evident, then, that the compensation of the position shall vary from a minimum for the beginner to a maximum for the master. This is the principle of gradation, or graduation of pay. We see it best exemplified in the larger universities where it is possible for a teacher to advance in the course of twenty years from an instructorship at \$1,000 to a full professorship at \$8,000 to \$10,000. It is highly desirable that in time the same principle becomes universally applied in the field of public education and that the range in salary for classroom teachers be graded upward from a mere living wage for the apprentice to a wage three to five times as high for the master teacher. We believe that much more attention will be paid to this principle in the future than has been paid in the past. As educational administration passes out of the hands of politically minded amateurs into the hands of professionally minded technical experts, more and more attention will be given to the gradation of payment as a powerful stimulus to continual growth and improvement of teachers.

The Single-Salary Scale

A slowly growing consciousness of these ideas has resulted in the evolution of what is now known as the single-salary schedule, the basic idea of which is that the school years and subjects are of equal importance in the development of children. Therefore, teaching in one grade or subject is just as important a service, and requires approximately equivalent skill, as teaching in any other grade or subject and should be so recognized in the schedule of salaries. The same kind of pre-service and in-service training is not required of all but like amounts are required. We are beginning to realize that teaching in the lower grades is as highly a skilled service as teaching elsewhere. This is borne out by modern psychological, psychiatric and medical opinion. The training of young children is in the opinions of a number of experts a more important service than the training of the same children when they are older. No salary schedule should deprive any level of the service of its finest teachers. Advancement to higher grades or other types of positions should not be used as an incentive. The expert should remain in the field of his specialization. Every grade should be dignified by the retention of its specialists and they should be paid as well as equal service would be paid elsewhere.

Summary and Conclusions

First, and foremost, we must safeguard the interests of children in the schools.

Second, we must protect the best interests of society.

Third, we must protect the best interests of the profession.

These interests are mutually inclusive and not exclusive. In developing a true profession of teaching we are not concerned with the profession as an end in itself. The profession is but a means to an end; and the improvement of the profession is the most important means of protecting the best interests of the children and of the public at large. It is a case where the means and the ends should not be separated. In the up-building of a true profession we must of necessity protect and promote the best welfare of the children and of society.

Fourth, spoils must be made impossible.

Fifth, protection must be provided against the ruthless operation of the law of supply and demand.

Sixth, salaries must bear some ratio to the standard of living.

Seventh, the position should be paid and not the person.

Eighth, salaries for given grades of service must be graduated from a minimum to a maximum.

Ninth, school years and subjects are of equal importance in the development of children and should therefore be so recognized in salary schedules. To this list should be added the following:

Tenth, the cost of training represents a direct investment and, therefore, additional amounts of necessary training should be compensated for, as this will encourage continued improvement and tend to prevent stagnating the service.

Eleventh, greater care should be exercised than at present in avoiding the overpayment of the beginner and the underpayment of the person with a long record of successful service. The beginner is now getting the long end of the salary stick. The range between the beginning salary and the ultimate salary is too low. It is now rarely more than the ratio of 1 to 2, where it should be 1 to 3 or 4 or better. This cannot be accomplished if we continue as in the past to raise the minimum salary. Stop raising the minimum salary. In fact, we might better think of lowering it a little rather than raising it. I am now speaking of large cities. Take the money saved by not raising the minimum salary and apply it to raising the maximum.

Twelfth, another matter needs attention. The maximum of most schedules is reached too soon. In a real profession, maximums are rarely reached before twenty years of service. In colleges and universities this is also true. In fact, why shouldn't the public schools ape the practices of the universities in this matter of salary schedules? If we are desirous of building a highly trained profession, we will find the university our chief model.

Thirteenth, no discussion of principles is complete, without a reference to the much-mooted question of equal pay for equal work. We are undoubtedly moving in that direction and as soon as possible we should eliminate the distinction between the sexes. Classroom teaching has become a profession in which women are eminently successful and in which they should have the opportunity for a career the equal to that of men.

Fourteenth, finally we come to the vexing question of merit. Theoretically, of course, different degrees of merit should be recognized and rewarded. But we must remember that we are dealing with public and not private service and while in theory there should be no difference in reality there is a marked difference. In one case, management has full control; in the other, it has little or no control. The vast majority of superintendents in our largest cities have abandoned any serious attempt to solve this problem.

The Principles Underlying the Maximum Salary

Supt. R. C. Clark, Seymour, Connecticut

In our discussion of the minimum salary, it was pointed out that it should be large enough to attract promising young men and women to the profession. In this as in most professions, it is possible that the minimum salary is not so potent as the maximum in performing this function. A successful physician once told the writer that his income during his first month of practice was two dollars. Most of the professions offer little financial reward for the first two or three years, but they obtain their recruits through interest in the work, the hope of an increasing income, and a high maximum.

A Living Wage

While conditions in the teaching profession are affected by the fact that most teachers are women, it is probable that if the minimum is a living wage, an adequate maximum will draw promising young men and women. But, it must do more than that. It must hold them in the profession after they have reached maturity. A study of teacher turnover is a distinct contribution to education in any state. We sometimes are thrilled to learn that men and women who have become distinguished in business, the professions, war, and politics were once public-school teachers. The tragedy so far as public-school education is concerned is that in justice to themselves and their dependents, so many of the keenest-minded have been forced to abandon classroom teaching for a different field. Teaching has been merely a stepping-stone to their real lifework. Many men and women of high character, erudition, power, and ability find in the satisfactions of the teacher's work more compensation than they would find in any profession which pays a higher financial reward. These people have been, and are, the salvation of our public schools. So far as the salary schedule is concerned there has been, and is little, to hold those of superior ability. Many have felt that they could not make the financial sacrifice which classroom teaching demands of the most able. There seems to be a feeling on the part of schedule makers or more accurately probably, on the part of the communities which they represent, that the talent of any person who can command a high salary is wasted in the classroom. Much torrid oratory exalts the importance of the classroom teacher. Salary levels are still temperate for the superior teacher who is on the maximum.

It was pointed out in a previous paper that the minimum salaries, even in towns of widely different sizes in a limited geographical area, are about the same. This is far from true in regard to the maximum. It is possible in Connecticut, for example, for one grade teacher to be earning a maximum salary \$1,000 higher than another of equal training, also on the maximum. It is possible in this same state for two high-school teachers, with equal training and both on maximum, but employed in different towns, to be \$2,000 apart as to salary level. The conclusion is that there cannot be anything like equal educational opportunity where such conditions exist.

Limitation of the Maximum Salary

The maximum salary will be limited by the value the community places on good teaching and the tax that can be reasonably carried by the community. In general, it may be said that with notable exceptions, the smaller places have a lower maximum than the larger. The small towns have problems growing out of small enrollment per teacher, transportation, and tax problems arising in sparsely settled communities. The larger places, as a rule, seem to have better ability to pay. Then, too, the cost of

Note: This is the third of Mr. Clark's series of studies of the teachers' salary problem in small communities. Previous articles discussed the minimum salary and principles of advancing salaries. School boards and superintendents in small cities will find the paper especially applicable to their conditions.

living is usually somewhat less in the smaller places. On the other hand, the child in the rural community is entitled to as good teaching as the child in the city. It seems evident that it requires as much of energy and ability to teach forty children at the cross roads as it does in the metropolis. The real wage of the teacher then should be about the same. It is, however, far from it. There seems to be a direct correlation between population and the maximum salary.

As a rule, towns near the large cities pay a higher maximum than do those farther away. Some of the wealth of the cities finds its way to these places. The influence of the city is felt in all civic activities. The wall of conservatism so often found in more remote places is broken down. Standards of living are more expensive. Higher salaries are necessary in order to hold teachers. The writer, after dividing the towns of his own state according to the maximum salaries paid, plotted them on a map, with different colors for towns in the different level groups. He found that this principle was strikingly portrayed.

Residential Towns Pay High Salaries

Towns paying unusually high salaries for their size are largely residential. This principle does not always hold true. Yet, the residential towns are likely to be populated by people who have a high ideal regarding the educational advantages they wish to furnish their children. They desire good schools and are willing to pay for them.

It is difficult to determine accurately the relative ability of towns to support schools. Some towns have considerable income from property, which is used only in summer by people who send their children to school at their winter residence. In other towns, parochial schools relieve the burden. Still other towns have a population of unskilled laborers, who pay small taxes, but who raise many children to be educated. In at least one instance, large manufacturing plants are located near the line of the town in which they pay large taxes. The workers live across the line in another town. These circumstances make a difficult tax problem and result in unequal ability to support education. In the matter of teachers' salaries, the situation is still more complicated. As pointed out, some towns have transportation problems, others have none. Some have the problem of the sparsely settled districts, making small and expensive rural schools necessary. Other towns gain the economy that comes from concentration. Some towns need large capital outlays; other towns do not. The money available for teachers' salaries is affected by all these circumstances.

Examples of Ability to Pay

The department of research and surveys of the State Board of Education in Connecticut takes the grand list as related to the number of children to be educated and ranks the towns in ability to pay for education. While this is not strictly valid on account of inaccuracies in the grand lists, the variance between real value and valuation for taxation as determined in different towns, and the considerations mentioned above, it is probably the most indicative of anything we have. Dividing the towns into four groups, according to the position on the list, it is noted that there is a tendency for towns to pay a

maximum salary in proportion to the ability to pay.

TABLE XVI. Maximum Salaries as Related to Ability to Pay — Elementary Schools in Connecticut					
SALARY	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2000 or more....	8	4	1	0	13
1700 to 1999....	3	7	4	4	18
1400 to 1699....	5	5	9	8	27
Less than 1400	0	0	2	4	6
	16	16	16	16	64

TABLE XVII. Maximum Salaries as Related to Ability to Pay — High-School Women Teachers in Connecticut					
SALARY	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2500 up	9	2	0	0	11
2100 to 2499....	2	5	2	2	11
1800 to 2099....	1	3	7	7	18
Less than 1800	0	2	3	2	7
	12	12	12	11	47

Differences in ability account in part for the differences in maximum salaries paid teachers. This forces a large proportion of experienced and better-qualified teachers to leave towns where lower salaries are paid, with the result that education in the less wealthy towns is left to the superior teacher who is held to the particular town by other than salary reasons, the inexperienced, or the mediocre. Good teaching is as much the objection in small towns as in large ones, in the poor as the rich. The supporters of education look forward to some equalization measure which will enable the poorer towns to give an education more nearly equal.

Despite the fact that there is a real difference in the ability to pay, the small maximum salary in many towns cannot be entirely justified on this ground. Some fairly well-to-do towns are afflicted with a poverty complex as far as education is concerned. Schedule makers should remember that money spent on an adequate salary schedule is an investment yielding large returns, and that parsimony is a betrayal of the trust which has been put into their hands. They must think in terms not only of dollars to be paid by the taxpayer, but of the children who are entitled to a good elementary and high-school education. Some towns need an intelligent and forceful lay leadership, which believes in education and in the protection of the school children. The adoption of an adequate salary schedule, with a proper maximum, will tend to retain competent teachers in the service of the town. Such leaders coöperating with wise professional guidance can advance the cause of good schools. This can be done by educating the people to the need of retaining good teachers and paying a salary as nearly adequate as the wealth of the town permits.

Equal Compensation for Women

"The Louisiana legislature, at its 1928 session, adopted a law, making it mandatory to equalize the salaries of men and women engaged in teaching in the public schools of the state."¹

The news item quoted above reminds us that the "equal pay for equal service" slogan is a live issue when salary schedules are being built or adjusted. The division of research of the National Education Association reports that 23.9 per cent of 1,523 cities of over 2,500 population have rules requiring that salaries of men and women of equal training and experience holding similar positions shall be the same.² The argument of the supporters of such a rule is that of common justice. They contend that efficiency in teaching is not a matter of sex, but of the individual personality, training, and experience. Where equal service is rendered there should be equal compensation.

¹News Item, AMERICAN SCHOOL BOARD JOURNAL, January, 1928.

²Practices Affecting Teacher Personnel, Research Bulletin of the N.E.A., Vol. VI, No. 4, Sept. 1928, p. 246.

Paying Higher Salaries to Men

Many arguments for paying men a higher wage are advanced. It is said that the cost of living for men is higher than that of women. Men are more likely to have dependents. Men usually carry a heavier extracurricula load than do women. Children need the point of view and the moral influence of men teachers. It is argued that children, especially boys, of the upper grades and high school where there are few men teachers, come to feel that scholarship is something effeminate, perfectly proper for girls and women, but not valuable for men. It is desirable to have a number of men teachers in these grades. To secure and hold strong men, it is necessary to pay higher salaries to men than to women. The economic law of supply and demand enters here. Under present conditions, in most towns it is necessary to offer a larger remuneration for men than for women in order to obtain capable men teachers. Where few men teachers are employed they are often not on schedule. They are paid more than women. While this usually applies to the whole schedule, it is especially true of the maximum salary.

Among the arguments advanced for paying higher salaries to men than to women is that men are more likely to have dependents. Probably one of the reasons that only 131 out of 7,121 Connecticut elementary-school teachers in 1927 were men,³ is that salaries, as a rule, are not sufficient to support a family in the way a man with adequate training would desire. In the lower grades women are better teachers. It is probable that more men would be employed in the upper grades if suitable teachers could be secured for the salary paid. In the high school, men are paid more, because desirable men feel that a family cannot be well supported on a woman's schedule. In a few towns where women and men have equal pay, the scale for women has been raised to a level on which a family can be supported. It seems to be generally assumed, however, that the woman teacher supports only herself.

Whether the maximum salaries are a saving wage, a cultural wage, the financial culmination of a career depends on standards of living, ideas of culture, and the value set on the financial return. Some people prosper on a moderate income. Other persons are poor on ten thousand a year. It may be safe to say that the higher maxima provide a saving, even a cultural wage, where standards are modest and where there are no dependents. Teaching is an attractive lifework in itself to many people. It is a joy to them to guide the young to richer and fuller life through classroom activities. This should be true of all teachers. It would be unfortunate if financial gain were the only object of the teacher. The long summer vacation is most en-

³Report of the Board of Education, Public Document No. 8, Part III, 1927, p. 96.

joyable. These factors have to be given disproportionate weight before the maximum salaries now paid can be called adequate to place classroom teaching as a career on a basis equal to the other professions.

Maximum Affected by Experience

Where years of experience are required to reach it, the maximum is generally higher. In many school systems the maximum for the junior-high-school teacher is higher than that for the graduate teacher, and the maximum for the senior high school is highest. Education or training, including that obtained while in service, affects the maximum. Unusually meritorious service is the basis for a supermaximum in some towns. Often there is a higher maximum for men than for women. If a teacher is so outstandingly strong that she can carry an unusually heavy teaching load, or can do some special assignment, her maximum is higher as is indeed her whole schedule.

It is a question whether the highest salary should be assessible to all teachers who are good enough to hold their jobs. It is doubtful whether superior training should alone be sufficient to place the teacher on the highest salary. A maximum for all teachers, and a supermaximum for superior training and classroom performance should be allowed, when there is adequate supervision. Here the aim is to hold superior teachers in the profession without burdening the taxpayers by the payment of too high salaries to ordinary, though experienced teachers. It should be the aim to obtain superior service.

Preparation of a Salary Schedule

In the construction of a salary schedule consideration should be given not only to the question, "What shall we pay?" but to the equally important one, "What shall we pay for?" Do we wish well-trained, experienced, teachers? Do we desire special qualifications for some positions? Do we expect teachers to continue in growth by in-service training? Do we desire to reward special merit? Do we consider that teaching should be made a career for the most able? The answers to these and other questions raised will determine the principles upon which our schedules shall be built.

Salary schedules should be reconsidered from time to time upon the initiative of the employers. Representatives of the teacher and business organizations should be called into conference. Too often, the initiative is taken by teacher organizations which prepare a schedule with little in mind save the salary levels. When such a schedule is presented, it should be carefully reviewed and amended, according to certain definite principles which have been generally accepted. If the schedule is built upon principles which are sound, and is skillfully constructed, it may prove an effective means for the promotion of higher educational standards.



MR. DAVID P. HARDY,
Deputy Superintendent of Schools,
San Francisco, California
President-Elect, Public-School Business Officials' Association
of the State of California.

Mr. David P. Hardy, deputy superintendent of schools of San Francisco, in charge of the business affairs of the board of education, was recently elected president of the Public-School Business Officials' Association of California, at its meeting held on March 16.

Mr. Hardy, who is a native of California, was graduated from the Berkeley High School and the University of California. He majored in mechanical drawing at the University, and following his graduation, taught mathematics in the secondary schools of San Francisco. He remained in this work until appointed to his present position as deputy superintendent in 1924. Mr. Hardy was identified with the National Guard, saw service on the Mexican Border in 1916, and served for twenty months during the World War at Fortress Monroe. At present, he holds the rank of a lieutenant colonel in the 250th coast artillery of San Francisco.

The California organization, of which Mr. Hardy has been elected head, is composed of business managers, auditors, secretaries, and other noninstructional executives in the California schools. It is affiliated with the national organization, which meets shortly in New Orleans for its annual convention.

crease by districts of water meters, gas meters, electric meters, telephones and residence building permits. Pin maps have been made of junior- and senior-high-school pupils, giving exact locations by blocks as well as numerical tabulation by blocks, so that the pupils in any given area can be quickly determined. We have a dot map of the Edison vocational school and the Colored high school. We have the dot maps and tabulations of the Southwestern Bell Telephone population survey for 1928 and their predictions for 1949, with predictions also for 6 and 12 years ahead.

Studies have been made of the present transportation facilities and the city plan of major streets and street widening, as approved by the chamber of commerce and the city commissioners. Along with this has been developed school district boundaries with respect to special transportation hazards, as steam and electric railway lines, bus lines, and fast boulevard traffic.

We have a continuing pin map of residence building permits, changing the color each year. Readjustments of school district boundaries are being made to take care of new development and these are worked out from factual material as to pupil location. Some buildings in the past were located too close together, thus causing poor classification of pupils, smaller and more expensive classes and higher administrative costs. This has been studied so that we may prevent as much of this as possible in the future. Room utilization studies of all present buildings have been worked out in terms of accepted standards, to find out how near we are using these rooms to capacity.

Our curriculum is under constant revision and study under the associate superintendent in charge of curriculum administration. The effect of this work is a vital element in our actual building planning. We are trying to provide

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Tulsa's Continuing Study of Schoolhousing

Frank R. Pauly, Director of Research, Tulsa Public Schools

In any study of schoolhousing in a city of nearly 200,000 there are many factors that must be considered both from theoretical considerations and from a practical viewpoint. There are available several excellent checking lists for studying school buildings and building programs. In an actual situation, the items we have studied and what we are studying with respect to our building program, has been determined largely by local conditions. We have just completed a building program from a bond issue of \$1,750,000 voted a year and a half ago, but another bond issue will have to be voted this next school year and we must interpret our needs to the public completely, continuously, and accurately.

In Tulsa we are studying the following more or less routine items: (1) school growth by buildings; (2) school census by school districts; (3) rate of growth at various school levels and in various sections of the city; (4) the holding power of junior and senior high schools. We are also studying rate of promotion and resultant piling up of failures in lower grades on the one hand, or the effect, on the other hand, of a proposal to give all pupils approximately six years of elementary schooling, followed by the organization of sufficient special classes in junior high schools to take care of the lower levels of ability thus pushed forward with pupils of their own social age.

We have studied the number and relative in-

The Technique of Visitation and Conference with Teachers

O. C. Pratt, Superintendent of Schools, Spokane, Washington

For effective classroom visitation, two prerequisites are essential: (1) a proper relationship between the supervisor and the teachers; and (2) preparation by both the supervisor and the teachers. The relationship should be friendly, sympathetic, democratic, and coöperative. The preparation involves the selection of a definite objective, a study of the best teaching technique relating thereto, and agreement on the basic principles underlying the teaching.

Except for incidental "dropping in," visitation is either (1) inspectional, or (2) supervisory. In case of the former the supervisor goes into the classroom to get a general impression of how things are going, to check-up on classroom management and discipline, or to locate weak spots. For such purposes inspection is useful. It takes only a few minutes to note such items as temperature, ventilation, general disciplinary conditions, and attitudes of pupils. The weakness of inspection is its superficiality. It does not permit the thoroughgoing analysis which the supervisor must make, before he can be of much service in remedying the situation. The important thing, for instance, is not the discovery that a poor disciplinary condition exists, but a knowledge of the causes, and how they may be removed.

Constructive Supervision

It is in this respect that genuine supervisory visitation differs from inspection. The purpose of the supervisory visit is to improve teaching by giving direct constructive help. For this purpose a much longer visit is necessary, in order that the supervisor may fully understand in just what respects the teaching is strong, and in what specific ways it could be improved. Such supervisory visits are a feature of constructive supervision.

From the teacher's standpoint such visits may be classified as unannounced, scheduled, or invitational. The unannounced visit is objectionable, in that it may seem to the teacher that the supervisor is trying to catch her at a disadvantage. On this account it tends to put the teacher on the defense against supervision.

The scheduled visit is one which is the natural result of a coöperative study and discussion by the supervisor and the teacher. It should be preceded by careful study and planning. The supervisor comes at a prearranged time to observe how well the plans mutually agreed upon are working. There is a definite and understood purpose for the visit other than catching the teacher in some remissness; hence, the teacher's attitude is apt to be better.

The invitational visit is one made by the supervisor in response to an invitation from the teacher. It has the advantage of assuring a proper attitude on the part of the teacher. Insofar as the invitation fits in with a definitely formulated plan, it is the best form. It cannot be used exclusively, however, as it would substitute random visitation for the planned and purposeful kind. It would thereby deprive some teachers most needing help from receiving it, since such teachers are least apt to invite the supervisor to visit their work.

Phases of Supervisory Work

The supervisory visit has three phases; viz., preparation, observation, and conference. The preparatory phase also falls into three divisions: (1) the selection of an objective; (2) the study of the teaching technique relating thereto; and (3) a definite schedule of visitation to observe results. The objective should be chosen in co-operation with the teacher, and only one main objective should be undertaken at a time. The study of the best teaching technique ought also

to be a coöperative matter. When the basic principles which underlie the teaching of the selected subject are fully understood and accepted by the teacher as well as by the supervisor, the teacher then attempts to apply them, and the supervisor arranges a schedule of visits in order that he may aid the project of better teaching.

The observation, or actual visitation phase, has a fairly definite technique of its own:

1. The teachers to be first visited should be those who are relatively inexperienced, new to the system, or known to need help.
2. The supervisor should enter the room quietly, merely giving a cheerful word of greeting.
3. The supervisor should take an inconspicuous position where he will not attract undue attention.
4. The supervisor should follow the work with close attention and with obvious interest.
5. Unless requested to do so, the supervisor should not ordinarily break into the recitation. If he does so break in, he should first ask permission of the teacher.
6. Ordinarily the visit should cover the entire recitation period.
7. The supervisor should try to analyze the teaching, especially with reference to its major points of strength and weakness.
8. The supervisor should make careful and detailed record of his observations. If the relationship between the supervisor and teacher is as it should be, these notes should be made in the classroom.
9. The best form for the record is a check list, with a blank space to the right and below for explanatory notes. If desired, a carbon copy for the teacher may be made at the same time.

The visit is valueless, unless there is some method by which the reactions and suggestions of the supervisor are sure to be made known to the teacher. The best follow-up procedure is the "conference." While potentially of great value, it will not prove to be so unless safeguarded by proper technique.

Common Defects of Supervisory Conference

There are two common defects in the conference as frequently conducted, either of which may largely or wholly destroy its value. These defects are indulgence in superficialities and personalities.

A conference must necessarily deal with superficialities if the understanding of the situation by the supervisor is superficial; and his knowledge of the teacher's work will be superficial if it is based on random, inspectional, and infrequent visitation. Another cause of super-

ficiality in the conference is failure on the part of either supervisor or principal to make thoroughgoing, professional preparation before the visit, with the result that there is no definite objective at the time of the visit.

The conference that flies off, or flares off, on the tangent of personalities is also usually a product of superficiality. Instead of being based, as it should be, on mutually understood and accepted principles, it merely reflects the supervisor's opinion. Naturally the teacher has an opinion of her own which may differ from that of the supervisor. Stung by the latter's adverse criticism, which she attributes to personal prejudice, she feels that the supervisor "has it in" for her. The resentment thus aroused may flare up into a heated interchange between the two, or it may smoulder beneath the surface. In either event the unfriendly feeling is an insuperable barrier to supervision interpreted as the improvement of teaching.

Supervision of the best type is impossible without visitation, and especially without the final phase of visitation, the follow-up conference. The latter is essential as the fruitage of visitation, but it must be conducted in accordance with proper technique.

To this point the discussion relates chiefly to the post-teaching conference. There are two other kinds of conference, the morale-building and the pre-teaching. The former relates to those conversations more or less incidental ordinarily, but sometimes definitely scheduled, by which the supervisor tries to build up the morale of a teacher unduly discouraged. It is desirable that teachers have a joyous and optimistic outlook on life. It may be necessary at times for the supervisor consciously to set about the task of restoring courage and poise to a downcast or overburdened teacher.

The pre-teaching conference is less apt to arouse the resentment of teachers than the post-teaching one, since it looks to the future rather than to the past. To be most successful it must have a definite objective and careful

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A SIXTH GRADE DOES ITS WORK FOR THE TALKING MOVIES.

The present illustration is a single picture of a talking movie taken recently at Bronxville, New York, under the direction of Mr. V. C. Arnsperger, director of educational research for Educational Research Products, Inc. The picture was made with the advice and cooperation of Supt. W. W. Beatty to illustrate typical classroom activities in a typical modern school. The pictures are intended not only for local publicity, but especially for teacher-training work.

The Superintendent's Monthly Report to the School Board—I

O. S. Glover, Superintendent of Schools, Edina-Morningside, Minnesota
J. John Halverson, Superintendent of Schools, Chaska, Minnesota

The outcomes of the deliberations which take place at the school-board meeting are undoubtedly greatly influenced by the program governing the procedure at the meeting. Many of us are familiar with the usual practice followed at board meetings in many communities. After the president has called the meeting to order and the minutes of the previous meetings have been read, the order of business is often rather indefinite. Much irrelevant discussion usually takes place, wasting time and leading nowhere.

The superintendent ought to be the best-informed person on matters of major importance for the consideration of the board, because of his professional training and his daily contact with his school. The superintendent with a vision has in mind a purposeful program for the development of his school. It becomes his function, then, to direct the trend of the board's deliberations toward the realization of this program. To ascertain to what extent schoolmen in Minnesota are using the monthly report in attempting to guide their boards in the economical consideration of essential business, 186 superintendents in schools enrolling at least 200 in the elementary grades were asked to contribute the information used in this paper.

Type of Reports	Frequency
Monthly written reports	39
Monthly oral reports	32
Monthly impromptu reports	2
Occasional written reports	5
Occasional oral reports	9
Annual written reports	4
No reports	1
Practice not clearly indicated	5
Total	102

The Written Monthly Report

Four different procedures were found in the matter of presenting the monthly report. In 7 cases the superintendent made only one type-written copy and read the report to the board. In 18 cases one copy of the report is presented to each board member at the meeting. Twelve superintendents mail each board member a copy several days in advance of the meeting. In 2 cases the board members not only received a copy of the report in advance, but another at the meeting.

The function of the written report is to give board members definite information on projects completed, in progress, or contemplated, and to secure approval of the board on all other matters requiring action. To perform this function efficiently the superintendent requires time to study the different aspects of the proposals which he will present to the board. He not only requires time, but also adequate, definite data, whereby he can justify his recommendations. To make the recommendations acceptable to the board they must be presented in a logical order and with ample explanations of the data.

A proposal involving the expenditure of money may require consideration of:

1. The need for such expenditure.
2. The ability of the district to meet this obligation.
3. The general practice in other comparable school systems.
4. The outcomes expected from the proposed expenditures based on investigations in other schools.
5. The relative difference in cost of the present practice and the proposed practice.
6. Several sets of specifications with approximate costs.

Likewise, if the proposal involves a change in policy, all the steps appertaining to the change should be presented. If new proposals are pre-

The superintendent's report is the most important means by which purely educational and executive matters are brought to the school board's attention. The present paper is the first half of an article by two experienced superintendents who have made a study extending over two years.

—The Editor.

sented in this manner, and board members are given time to consider the data presented, they will be capable of arriving at intelligent decisions which they can justify to their constituents. If this is true, it seems that the practice of preparing a single copy of a report and reading it at the meeting is open to objection, because it has given the board members no opportunity to consider the proposals before the meeting.

The practice of preparing a copy of the report for each member and presenting it to him at the meeting, overcomes this objection in part, but not wholly; for the board member still has to reach a decision in a comparatively short time, or postpone his decision until a future meeting.

Since the tendency of board members is probably either to postpone or vote against proposals on which they are meagerly informed, or informed on short notice, it would seem that the practice of sending the report to board members several days in advance of the meeting is a desirable procedure to follow. Where this procedure is employed, it is wise to file an additional copy of each report in the office to insure each member having a copy for reference at the meeting. Some superintendents file these additional copies in loose-leaf notebooks with each board member's name on his copy. This practice provides for each member a record to which he can refer, especially effective if also the minutes of the board's meetings are included with the reports. At the end of the year these reports may then be indexed and bound and will become a permanent record of the year's activities as reported by the superintendent and acted on by the board. An incoming superintendent will acquire much useful information regarding previous practices and the operation of established policies from the reading of such a record.



WALTER J. COOKSON,
Member, School Committee,
Worcester, Mass.

At the recent municipal election in Worcester, Massachusetts, Walter J. Cookson, chairman of the Worcester school committee, was reelected as committeeman at large by a majority of practically 9500. He received the largest number of votes that any candidate for municipal office has ever received in Worcester.

Mr. Cookson has been a member of the Worcester school committee for twenty-three years. From 1920 to 1922, he was vice-chairman, and since 1922 he has been chairman. Under his leadership, the city has carried out an extensive building program during the past five years, involving the expenditure of between four and five millions of dollars.

In the business world, Mr. Cookson is secretary of the Migeo Sales Company, and also New England sales manager for the Fuller-Warren Company of Troy, New York.

Oral Monthly Report from Notes

Considered in the light of the foregoing discussion of the purpose of the superintendent's report to the board, it seems that the oral report is wholly inadequate as a vehicle for conveying information to the board that will facilitate intelligent action.

Under this plan as well as under the plan of reading a report, the board member comes to the meeting with insufficient knowledge of what is to be considered. These objections can be employed even more in the case of the impromptu or occasional oral report.

It is fair to assume that board members do not go to meetings without having given some thought to questions likely to be considered. In fact, in the absence of definite information from the superintendent indicating that he is thoroughly informed and vitally interested in the problems of the school system, the more conscientious board members will endeavor, more or less independently, to secure information on problems which seem to them to be important. However commendable the intentions of the board members, it is not fair to expect them to have the needed data for arriving at intelligent decisions on complicated school problems. Moreover, in almost all cases board members serve without pay, whereas the superintendent is a paid employee of the board, from whom they have a right to expect intelligent guidance in the same manner as the board of directors of a commercial enterprise expects information from the manager of its business.

Subjects Covered in Both Oral and Written Reports

The authors have classified the activities on which reports are made under three main heads: financial, personnel, instruction, and other activities.

Superintendents report on 19 subjects which have been classified under financial activities. The frequency of the occurrence of these subjects in the reports is presented in Table II.

Table II. Financial Problems Which Are Treated in Superintendents' Reports

Item	Written Per Cent	Oral Per Cent
Monthly bills	92	86
Budget	86	93
Expenditures	68	61
Income from Taxes	65	51
Building situation	65	45
Maintenance recommendations	63	54
Indebtedness	59	38
Salary schedule	57	70
Monthly financial statement	54	42
Insurance	54	29
Tuition pupils	51	74
Financial recommendations	51	42
Bids on school expenditures	41	45
Petty cash	41	32
School banking	32	10
Sinking fund	27	29
Revolving fund	27	06
Retirement fund	27	06
Recommendation of transportation equipment	16	22

This table presents a picture of business procedure which is not unfamiliar to the average school-board member and superintendent. The interest is rather in the ranking of the subjects than in their scope.

Current fiscal expenditures, i.e., monthly bills, are apparently handled by the superintendent in 92 per cent of the cases where written reports are made and in 86 per cent of the cases where oral reports are given. That monthly bills come first is to be expected.

That the budget stands second in written reports and first in oral reports indicates a commendable practice.

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The Selection of Textbooks*

Guy M. Whipple, Secretary of the National Society for the Study of Education, Danvers, Massachusetts

I. Is the Problem Important

I can imagine educators who might regard the discussion of the textbook as a waste of time on the grounds that the textbook is destined soon to pass out of use, and that even while it continues to be used, it is a relatively unimportant aspect of school activity, either educationally or financially. It makes little difference, some will argue, what textbooks you use if only you have properly trained teachers; the cost of education is in supervision and teaching, not in textbooks. It is true that relatively little money is spent for textbooks, but still it may not be unimportant how that little is spent.

From information recently gathered by the Office of Education of the U. S. Department of the Interior, we can discover how much money was received for textbooks in 1928 from 60 textbook publishers, including all the large firms and also the state-printed books of California. The total number of textbooks sold in 1928 was, in round numbers, for the elementary school, $39\frac{1}{2}$ million; for the high school, $18\frac{1}{2}$ million; for normal schools, colleges, and universities, 6 million; for all institutions, then, about 64 million. The average net cost of these books (to which would have to be added about one fourth to get the retail price) figures thus: elementary-school books, 57.7 cents each; high-school books, 87.2 cents each; college books, \$1.66 each.

If we assume that the 9 per cent of private-school pupils used 9 per cent of the books, we can compute that in all $35\frac{1}{2}$ million dollars were spent for text books for public-school pupils during 1928. That amounts, on the average, to \$1.41 per pupil; and it amounts, furthermore, to just 1.63 per cent of the total amount spent by these schools.

The professional trust-busting politician bemoans the way in which the schoolbook trust is draining the pockets of the taxpayers by its nefarious practices. Not much of a cry can be raised, however, about paying 57.7 cents for a typical elementary-school textbook, freely conceded to offer more useful material, better presented, better illustrated, better printed, and more attractively and more substantially bound, than can be bought for that money elsewhere in the world or than can be bought over the counter in general trade here in the United States. And not many tears can be extracted at the terrible revelation that, of every dollar contributed to the schools by the toiling taxpayer, 1.6 cents is paid out for textbooks, considering that in the country at large more money is spent for chewing gum than for textbooks.

Finally, not much warrant can be found for the assertion that textbook costs are increasing in startling fashion, because, expressed in simple figures, the fact is that comparing 1928 with 1913 — comparing, that is, the present situation with that 15 years ago — the enrollment in the public school has increased $1\frac{1}{3}$ times; the total school expense has increased 4 times; the net cost of textbooks has increased only $2\frac{1}{2}$ times, and the cost of free textbooks has increased only 2 times.

II. The Doctrine of Uniform Textbooks

What has just been said about the general excellence and the low cost of the typical textbook is directly related to the methods by which it is being created and selected. The cardinal reason for this qualitative excellence and this low cost is competition. I need not prove this point by arrays of figures; unprejudiced investi-

gators have demonstrated it clearly. Put obversely, what I wish to bring out is that if the type of textbook selection and production now in vogue in certain sections of the country — in California, notably — had been the general practice all over this country during the past quarter century, our modern textbooks would almost certainly never have developed. The extreme program that has been held up as ideal by some persons — state prescription of all textbooks, state printing of all books, and all books written by state authors — is certainly one of the most effective schemes ever contrived to discourage initiative, to retard the spread of new ideas, to encourage mediocrity, to hamper the work of the teacher, to increase the cost of the textbook, and to tempt political interference.

There are many persons who would never subscribe to this extreme program, but who believe, nevertheless, in applying the principle of uniformity (and hence of selection and prescription) to the extent at least of state control or state adoption — foregoing, that is, state printing and state authorship.

Arguments For and Against State Uniformity

In the earlier days, as you know, each pupil brought to the school whatever books his parents saw fit to purchase. The situation naturally was a trying one for the teacher and quite forbade anything like the systematic class instruction of the present day. Step by step, regulations were established to secure uniformity among the pupils' books, until at last the uniformity extended in many areas not merely to the school district, or to the township, or to the county, but to the entire state.

The arguments for state-wide uniformity are summarized briefly in the report of a Wisconsin textbook committee in these four statements:

1. It secures the lowest price of the best textbooks published.
2. It supplies, instead of the poor selection of purely local (school district) boards, textbooks selected by persons thoroughly acquainted with the educational problems.
3. It avoids the large increased cost owing to a continually shifting population.
4. It makes possible the formulation of a minimum course of study for the state that can be and will be taught in the schools.

At first blush, these arguments seem impressive and conclusive, but when the situation is more thoroughly illumined, they seem far less formidable.

1. So far as cost is concerned, the seeming argument vanishes when we realize that the circumstances are such that no publisher can legally quote a price for a specific textbook in one state that is lower than the price publicly announced in any other state. Consequently, a state that has no official machinery of state adoption at all can, and does, secure that book at the lowest price quoted for it elsewhere. Furthermore, if for one reason or another the price quoted for a state adoption is lower than that quoted for what seems to be the same textbook elsewhere, it will be found that the book supplied for state adoption must be in some way different from the book sold elsewhere under the same name — in other words, the special price means a special edition, usually on poorer paper and in a less durable binding. Yet again, the state adoption plan may actually operate against the "best textbooks," because if the author decides to incorporate in his textbook some definite improvement in content or method of presentation, the improved book be-

comes at once available to territory open to its sale, but the publisher dare not offer it in the state where the earlier edition was adopted, since the improved book is not legally the book that was adopted. Thus I heard of a case recently in which a certain textbook was definitely improved within a few weeks after it had been adopted by a certain state, but that state will for the next five years continue to receive and use the old and less-effective edition, strictly on the terms of its contract. State selection and adoption, therefore, affords no gain in price over local selection and adoption, and often means that the state gets inferior books, not the 'best textbooks published.'

Much more might be said on the relation of cost to textbook selection, particularly selection by state officials. Much ado is made by the politician about the thousands of dollars he saves the taxpayers by adopting the 35-cent health book instead of the 40-cent one. Alas, the public is impressed by the thousands of dollars and never perceives that all that has happened is that a few parents have made a profit of five cents on their own children; and what is more, that they may pay dearly for that nickel, for it is perfectly possible that the nickel's worth of increased efficiency in health training might have saved them a hundred dollars of doctors' bills. This training of the public to estimate the merit of textbooks in terms of cheapness has too often been one of the most vicious and indefensible outcomes of state textbook selection.

State Selection Not More Sagacious

2. As to the second argument, it is difficult to demonstrate that the selection of a textbook by a state board will insure a more sagacious choice than the selection by the educational authorities in a county, city, or town. In fact, a pretty good case could be made out for the superiority of the lists in use in the smaller areas by comparing in an unprejudiced way the actual list of textbooks in a typical state with the lists in typical cities and towns. Certainly, when special state-adoption editions of standard texts are compared with the regular editions of these same texts, sold by the same publishers to local school units, the chances are, as already explained, that the regular editions are better than the state-adoption editions.

3. The third argument — meeting mobility — is the one most commonly put forward first to support state selection and prescription. Thus, a California study showed that 71 per cent of the elementary-school pupils in that state had moved from one school system to another during their passage through the first eight grades, and that as many as 28 per cent of them had moved four or more times in the same period. This mobility of population is used to support two arguments: It is used to prove that it will save money for the parents if the same books are employed in all elementary schools, and to prove that it will unify the course of study if the same books are employed. The first argument — it will save money — becomes meaningless, of course, where textbooks are free. The second argument — it will unify the course of study — is not so significant as it seems, because of the remarkable differences that prevail among different schools in the same state with respect to grading, methods of teaching, and classification of pupils. Furthermore, a reasonable degree of intersystem uniformity does not mean complete uniformity; and a reasonable degree can be secured by the adoption of a course of study that sets forth only the minimal essentials of the elementary-school course and that remains sufficiently flexible to

*This paper was presented before Group I, Dept. Supt., N.E.A., at Atlantic City, February 25, 1930.

meet the varying needs of different communities and of teachers of different degrees of pedagogical skill.

4. What has just been said pertains likewise to the fourth argument for state uniformity—the argument that uniform textbooks permit a uniform and prescribed course of study. There are those, I know, who find tremendous satisfaction in this ideal of system and uniformity. Several years ago I talked with an educational official in Canada who said with the greatest pride: "It is now 10:15 o'clock, May 20th. I can tell you, by looking at my books, just what page in what textbook is being recited on at this moment in every fourth-grade class in this Province." But there are others who are convinced that state regulating of this sort is not desirable—certainly not when courses of study are laid down in terms of pages in prescribed textbooks. The point is that no course of study should be conceived of primarily as an outline based upon a textbook, however meritorious the book might be. The business of teachers is not to teach certain textbooks, but to teach children and to teach subject matter. The textbook is simply one classroom device to assist the teacher in this process. Progressive schools are giving their competent teachers great freedom in the selection and use not only of supplementary, but also of basal, books. The state may well limit its prescription, as has just been suggested, to an outline of the cardinal features, the minimal essentials, of the elementary grades, with perhaps recommendations for the grade-location of those topics, about which there is pretty general agreement.

The Extent of State Adoption

The refutation I have thus attempted of the four stock arguments for state uniformity of textbooks obviously is a refutation that does not appeal to all legislators. A map of the United States here, will indicate pictorially how thoroughly the plan of state adoption has swept the southern and western states. It is estimated that 38 per cent of all elementary-school pupils use books selected on this plan. Local adoption is limited substantially to the New England states, the states of the Great Lakes (Indiana excepted), and six North Central states (Minnesota, Iowa, North Dakota, Nebraska, Wyoming, and Colorado). County uniformity is the practice in Washington, South Dakota, Wisconsin, Missouri, and Maryland.

Of course, the details of practice vary more than would be indicated by this classification of all states as either state, county, or local textbook territory. There are various intermediate and supplementary plans intended to secure uniform books and cheap books; there are, for example, plans of state listing; there are devices like state depositories; and there are various adopting bodies, like state boards of education, state textbook commissions, county textbook boards. It is not my purpose to argue the merits and the demerits of these various formulations of the uniform textbook idea. Perhaps it will be sufficient to say that they usually offer great temptation to political interference; that they often arouse, and very justly, the irritation of school superintendents and teachers; that they often increase rather than decrease the cost of textbooks; and that they have not demonstrated their superiority to the smaller county and local selecting agencies. Perhaps it will be well to add that, contrary to the belief current in some quarters that the state adoption system and the state uniformity doctrine are favored and abetted by textbook publishers, the truth is just the opposite; the reputable and substantial textbook publishing houses would welcome the immediate and complete abolition of state uniformity, state prescription, state selection and adoption.

III. The Criteria of Selection

Let us drop this matter of the political or educational unit that should select textbooks.

Let us assume that a selection committee is at work, whether in a town or a city or a state, charged with the responsibility of recommending a text, or, perhaps better of recommending two or three or even a half dozen texts in a given subject. What is the best method for this committee to follow? What criteria should it employ?

1. *Suitable Content.* To begin with, you will agree that the committee ought to have clearly in its mind the *educational objectives to be attained* in the teaching of the subject in hand. What do we want of the textbook? Why are we using it at all? These obviously essential questions presumably ought to be answered by the course of study, whether laid down by the state, the county, or the city.

This brings us to the first, and most important, criterion for the selection of a textbook: "If used with reasonable intelligence by the average classroom teacher in our schools, will this book operate reasonably well to accomplish what we are asked to accomplish in our schools in these grades in this subject?" If the answer is "no," then that textbook ought not to be selected, however low its cost, however beautiful its illustrations, however famous its authors, however reputable its publisher, however widely it is being used in other cities and states, provided, naturally, there can be found some other textbook that *will* satisfy this criterion.

Now, I want you to note, as I mention these various criteria of selection, that each of them can be abused; that it is possible to go to the point of absurdity in insisting upon any given specification. In the case of this first criterion, please notice that I did not phrase it: "Does this book meet our course of study?" I intentionally said: "Will this book operate reasonably well to accomplish what we are asked to accomplish?" I can perfectly well imagine Book A, clearly superior to Book B in general organization, style, and pedagogical skill, but omitting, let us say, three topics specified in the course of study, being compared with Book B, which was thrown together by a hack writer in a rush attempt to meet exactly this course of study. Technically this Book B would meet the course of study completely, while Book A would not; actually Book A would be far and away the better book because it would make it possible for the teacher to accomplish successfully all the numerous objectives it did embody, while the three missing topics might easily be added by the teacher or turn out not to be especially important.

My first criterion, then, would be general fitness of the content to the general aims of the course of study.

The Real Test of Suitability

2. *Suitable Presentation.* But we all know that a textbook may be proper in content yet improper, or at least inappropriate, in *style of presentation*. I have in mind, for example, a book conceded to embody in a remarkable degree sound scholarship and logical organization of its subject matter. But the well-nigh universal verdict has been: "Teachers just can't use it. They can't teach it. They don't know enough to get out of it what is in it, and the pupils are helpless when they confront it." This book was prepared by a college professor of national repute. In general, it is clear that he shot over the heads of his readers; he failed to adapt his style of presentation to the needs and the abilities of either teachers or pupils.

This difficulty seems so obvious that any one could detect it, but that is not always the case. Sometimes it is only the acid test of experience that reveals such pedagogical unfitness.

A common method for checking a textbook in respect to its style of presentation—a method now much in vogue—is the use of the vocabulary index, the *vocabulary check*. It will be worth while, I feel, to point out that this check

is not always reliable. A publisher may announce, for example, that 80 per cent of the words used in his "Universal Fourth Reader" are found in the first two thousand words of the "Thorndike Word List." Does that prove that this reader is a good reader for the fourth grade? No; it does not. No one has proved that 80 per cent of the words used *ought* to be in the first two thousand, and certainly no one has proved that these particular words, assembled by any writer, will thereby automatically make a good fourth reader. I believe I could write a paragraph made up of those words, assembled in grammatically correct sentences that no person in this audience could understand on first hearing.

There are two points to be made here: First, the style of sentences is just as important, or almost as important, as the words in them; and second, if no provision is made for systematically introducing new words to the pupil, his vocabulary growth will never be noteworthy. Let me quote some figures on this point from my *How to Study Effectively* (p. 47):

When you were in the second grade you probably understood about 5,000 words. If you are now in the ninth grade, you probably understand about 14,000 words; if you are a college student, about 20,000 words. You can figure for yourself that, in order to make these numbers possible, you must be increasing your vocabulary by three or four words every day.

These observations, which were directed to young students to encourage them to make a definite effort to enlarge their vocabularies, might just as well be directed to textbook makers, because it is their business to see to it that three or four new words a day are placed before every pupil, and in such a way that their meaning is understood and their use encouraged.

Our textbook-selection committee, therefore, ought not to be carried away by statistics purporting to prove that Textbook A has a vocabulary limited to some arbitrary standard: Textbook B, containing many more new words, may be a distinctly better book, provided these new words are properly introduced and used in it.

Advantages and Dangers of Teaching Aids

3. *Suitable Teaching Aids.* Another feature that may well be kept in mind by our selection committee is that of *teaching aids*, or pedagogical devices. I refer, of course, to the skillful use of illustrations, maps, charts, diagrams, reviews, exercises, questions, projects, suggestions for outside reading, glossaries, indexes, side heads, teachers' manuals, and the like; in short, to all those features that are added to the straight text to make the book educationally more effective. Unquestionably, these aids are needed; unquestionably, they may be highly valuable; but also unquestionably what looks like an aid to teaching may be only a snare and delusion. To note that a proposed textbook contains questions and exercises at the end of each chapter is quite proper; enter it provisionally to the book's credit. But it is well to scrutinize these aids carefully and to try to evaluate them. A case in point: Within the past fortnight I read some "check exercises" which a classroom teacher declared had proved valuable in her work for insuring careful reading of a supplementary reader in the fourth grade. One chapter in this reader told the pupil a number of interesting things about owls; a typical question among those said to be so stimulating for that chapter was: "How many baby owls are there in the picture on page 18?" Check exercises of that order are probably less valuable than none at all. Another case in point: Much capital is made in a certain primary-grade book because there are ten true-false questions at the end of each chapter, and true-false questions as you know, are decidedly in vogue. My only comment on this particular second-grade teaching aid would be to tell you about an investigation on desirable sizes of type for second-grade

books now being made in Boston, during which a printed story was handed out to a class, read by them, collected, and followed by a printed list of ten "yes-no" questions. The examiner was greatly pleased because the pupils took to the idea so readily; every pupil answered every question within the few minutes allowed. The jolt the examiner got a little later will be appreciated when I tell you that on correcting the answers, she found she had handed the children a set of questions pertaining to another story that they had never read!

Let us be a little cautious, then, about giving a textbook a high credit mark just because it is well supplied with teaching aids. They may be as useless as these just mentioned.

The Reputation vs. Intrinsic Merit

4. Reputation of Author. The score cards for selecting textbooks always make provision for *Reputation of Author*. You must, then, if you are on the selection committee, ask yourself: "Is the author a person of repute in his line of endeavor?" But, perhaps, after all, you would do well first to ask: "Who wrote the book?" Yes, who did? If you could only know! I have never seen any statistics on this point, and no one will ever collect any! This much can safely be said: A large percentage of the really good elementary-school textbooks have been considerably revised when they reach the classroom; some of them have been well-nigh rewritten. Sometimes this reconstructing is done by ghost writers at so much an hour; oftener it is done in the editorial offices of the publishing houses. Not only that, but men and women whose ethical standards seem to me at least to be somewhere under one hundred per cent perfect, appear as co-authors of books to which they have contributed more than two or three hours of time glancing over the galley proofs or dictating a couple of introductory pages. I don't wish to be misunderstood as asserting that the authorship of most textbooks is incorrectly indicated by the title-page; I am merely asserting that the appearance there of a name well known in some line of educational endeavor does not guarantee that that person participated in the book to the extent that is implied and does not guarantee that if he did do so, his work did not have to be done over again by an editor cleverer than he.

There is still another aspect of this authorship criterion of excellence. After all, authors grow old, just as ordinary mortals do; and after all, their places must be taken by newcomers. Some of these newcomers are persons of superior ability. It is a great misfortune that a new and good book should be damned by a selection committee because no member of the committee ever heard of the writer before. What of it? He may have produced a masterpiece. Why not judge by the book itself rather than by the name of the author?

One more aspect of the authorship bugaboo: There is a common, and doubtless natural tendency to exalt the merits of any writer under whom the committee member has taken work, or of any author who is connected with the educational institution from which the committee member has graduated. This tendency is absurdly, and, as it seems to me, almost viciously effective in swaying textbook selection. For example, one hears of a city that we may call Megapolis, from which, during the past ten years, five hundred teachers have gone for summer course to an institution of learning that we may call Pomposa College. Any textbook publisher knows that if he can get the name of any man or any woman of the faculty of Pomposa College on the title-page of a textbook, he can place that book in Megapolis. The book need not be well written; it need not even fit the course of study, because that will speedily be changed to fit the book and the little halo that it carries about where it goes.



DR. WILLIAM J. O'SHEA,
Superintendent of Schools,
New York, New York

Dr. William J. O'Shea, for the last six years superintendent of schools of New York City, at the April meeting of the school board, was reelected for another term.

Superintendent O'Shea has been associated with the New York City school system for more than 40 years. He was graduated from the City College in 1887, was awarded the degree of master of science by Manhattan College, and later took graduate work at St. Francis Xavier College, New York University, Columbia and Fordham Universities. In 1913 Fordham conferred upon him the degree of LL.D. He also studied at the Bellevue Medical College.

Dr. O'Shea began his teaching career in Public School 75, Manhattan. In 1906 he was made a district superintendent, and in 1918 was made an associate superintendent. He was elected superintendent of schools in 1924, to succeed Dr. William L. Ettinger, who had been made superintendent-emeritus.

Dr. O'Shea is well-known in educational circles as an efficient leader of the school system, and is known for his devotion to the 1,200,000 pupils in the city schools of the Empire City.

Yes, there is no doubt that the names of authors and alleged authors sell books that sometimes ought not to be sold.

The Publisher's Contribution

5. Reputation of Publisher appears likewise on the lists of criteria for the selection of textbooks. In view of what I have just said about the skillful reconstruction of books in the offices of, or under the direction of, important publishing houses, I believe an argument could be made that the reputation of the publisher is often a better guarantee of the value of a book than the reputation of the author, but let that be as it may: I might be driven to admit that some publishers manage to succeed financially and to maintain their reputation despite the occasional publication of books of obviously inferior quality.

6. Suitable Format naturally must receive some consideration. Our selection committee should satisfy itself that the binding is reasonably durable; that the paper is reasonably opaque; and that the general typography — size of type, length of line, margin, leading — makes for reasonable legibility; likewise that the illustrations are reasonably numerous, adapted to bring out what should be brought out, and calculated to encourage the use of the book. I hear someone say: "Why stick in 'reasonably' in every sentence?" Just because many of the specifications laid down by educational and legislative bodies are not reasonable.

As to the binding, little need be said; many textbooks seem to me somewhat too well bound; they hang together long after their pages are soiled, torn, or dog-eared. As to the paper, again little need be said, save to smile at the authorities who demand clear and detailed halftone reproductions of photographs, then go on in almost the next sentence to denounce the use of the smooth-surfaced paper which even an amateur printer could have told them is essential for those detailed halftones. As a matter of fact, no publisher yearns to spend money on "paper that reflects too much light" — to quote a stock phrase — when the nearer he can come

to wood-pulp paper of the newspaper variety, the lower his retail price can be placed?

But it is in laying down type specifications that the educational committees afford the publishers the most amusement and at the same time the most annoyance. I think I am correct in saying that our greatest metropolis still publishes a list of specifications of the type that will be accepted in books designed for given grades, not any single item in which is couched in the system of measures used by type founders or printers or bookmakers, and almost no item of which, when translated into this system of measures, corresponds to any known style or face or size of type or leading. Very wisely, though to some of us very amusingly, these remarkable specifications for textbook printing conclude by saying that a rigid insistence on them will not be made if the printing exhibits sufficient general merit to make up for its departure from the specifications.

I wish there were time to trace for you the history of the notions that are current about proper printing. Let me suggest that there is much that is not yet known about type in textbooks. A selection committee should not put too much credit or too much debit against a textbook because of its typography. Thus, for example, I would deprecate such an utterance as this one recently brought to my attention: "Mr. X's new senior-high-school English is the very best book I have seen on that subject, but we cannot consider using it in this city because we notice that the exercises are printed in 9-point type." Of course, the retort is: "Who has ever shown that senior-high-school students would be injured in any way if they read a few sentences daily in 9-point type?" And the only correct answer to that is: "No one ever did. They read in the newspapers every day columns of 7-point and 6-point type far less well printed, and no one thinks of protesting."

Format, then, is a matter of significance; it should be considered in selecting textbooks; but it is easy to get finicky about it and lay too much stress on details that are after all not truly important.

Prejudices and Fads

7. Local Prejudice. I come now to a feature of selection which no selection committee, of course, theoretically ever printed in its list of criteria, but which would have to be inserted, and in boldface caps, if we wanted to make the printed specifications show what actually happens in many places. This inserted criterion would read *Local Prejudices*, and would embrace a series of questions to be answered by the selection committee. Of course, these questions would have to be framed to fit the locality and the subject matter of the book. For example, if the book were a history, then one question might read: "Is it certain that Robert E. Lee is made to stand out as a hero?" (for Southern committees) or "Is it certain that Robert E. Lee is not made to stand out as a hero?" (for Northern committees). If the committee is sitting in Tennessee, of course it will be obliged by state law to ask: "Is the monkey kept in his place in this book?" Again, I am sure from reading the recent news from our illustrious Senate that no book could be sold in Aroostook county, Maine, that pictured or praised the Idaho potato. You all know well enough what happened in Chicago to school histories that failed to twist the tail of the British lion at least once every ten pages. All you need to do to extend my illustrations is to get two or three book agents to tell you their experiences; you will be told that a book that referred in a mild, but perfectly truthful, way to the collapse of the land boom in a certain area was refused adoption in that area; that a series of good supplementary readers was scratched off the list of one large city because the tail of a mouse was drawn

(Continued on Page 158)

Is an All-Year Playground Surface Possible?

Santa Monica's Successful Method

Theodore H. Schoenwetter, Director of Research, Santa Monica, California

A useful article in the SCHOOL BOARD JOURNAL for November, 1929, describes the advantages of several types of surfacing for school playgrounds, and suggests indirectly the widespread interest of school officials in the problem of adapting the playground to the present physical-education program. The paper¹ referred to has prompted the writer to explain the process of surfacing playgrounds as developed in Santa Monica, Calif.

The climate of Southern California readily permits school children to take their physical education out-of-doors all the year round. However, this cannot be done, without a suitable hard-surface ground. This fact prompted the writer some seven years ago to investigate the most successful playground surfacing methods, to experiment with them, and to determine their good and bad features. The information obtained proved valuable as the basis upon which the present successful hard-surface specifications were prepared. Seven school playgrounds in Santa Monica were surfaced according to the specifications, and these have proved entirely satisfactory, without a single objectionable feature.

The process used on our playgrounds is known as the Santa Monica Cushion Surface. This particular surfacing has been adopted by the school district after six years of careful experimentation. During those six years we tried (1) calcium chloride, (2) sprinkling of school grounds by means of a fire hose, (3) surfacing of grounds with rock and oil, (4) planting grass, and (5) the application of a light grade of road oil. Mr. John A. Jackson, who has been in charge of the Department of School Grounds, has been active in all these experiments. He has generously devoted much time to the solution of this problem, with the result that the school system now has an all-purpose surface for school playgrounds which cannot be surpassed.

The Experiments and Their Value

Before describing the cushion surface, as developed, let us analyze the experiments and the advantages gained from them. Calcium chloride, it was found, is a satisfactory treatment for dusty school grounds. The objection to it, however, is that the upkeep cost is too great; in spite of the cost, there is nothing of permanent value, only additional expense year after year. The cost for calcium chloride was 1 cent per square foot the first year, and a reduction of 1 mill each year thereafter was noted.

The sprinkling of the school grounds with a fire hose is good, provided you cannot use any other method. This method, however, is rather costly, especially if the water must be paid for. It is likely to leave the grounds in muddy condition whenever the janitor or gardener becomes careless. Then, too, there will be complaints that the school grounds have not been sufficiently watered. In Santa Monica, we use this method only on the grounds used for baseball games.

Our first serious experiment in the surfacing of school playgrounds was an asphaltic-oil pavement. In trying the plan, the surface was properly graded and scarified. A 90-degree asphaltic road oil was applied to the ground, 1 gallon to the square yard. Just enough $\frac{1}{2}$ -in. rock was spread on the oil to completely cover it. This surface was rolled with a 5-ton roller. Light dust screenings were then rolled into the surface with hot 800-pound hand rollers. The spreading of dust screenings and hot rolling was continued until the oil ceased to come to the surface. The

chief objections to this method were three: First, its cost was 5 to 7 cents per square foot. Second, the surface was rather rough. It resulted in severe injuries to the knees of the children whenever they fell to the ground and caused great wear and tear on the shoes and clothing. Third, the 90 per cent oil "bled" profusely during the warm weather. This proved inconvenient and troublesome, even though the janitors were instructed to put sand on these places as soon as the "bleeding" started. After a period of two years, this "bleeding" practically disappeared.

As our second major experiment, lawn playgrounds were installed at two schools. From the standpoint of the physical-education department and the children, these lawns presented the appearance of ideal playgrounds. The grass plots were developed by seeding the ground simultaneously with four varieties of the most hardy grasses, devil grass, rye, clover, and blue grass. The lawns which have been in use for three years, do not show any signs of wear, since they are well cared for by the gardeners and are thoroughly watered two or three times each week. The chief objection to the grass playground is the high cost of installation and maintenance. It is not likely that the taxpayers in any city will agree to this method of spending tax money for all school grounds.

The method of applying a light grade of road oil directly to the ground is satisfactory, if a small amount is applied, and if an oil of light density is obtained. Gasoline stations follow this plan quite generally. If sufficient attention is not given to these two points, the oil will adhere to the shoes and clothing of the children, and will be tracked into the school building. An application of the oil, exclusive of the grading and scarifying of the ground, costs approximately .6 cents per square foot. Two applications of the oil are necessary the first year; thereafter one a year is sufficient. While this method is quite satisfactory, it does not give a permanent surface, and the upkeep cost must be met year after year.

The Most Practicable Method

The method which proved the most satisfactory was evolved in co-operation with a number of the school-district secretaries and business managers of Southern California. Some assistance was received from Memphis, Tenn. At first, different kinds of road and asphaltic oils were tried, until exactly the right kind was found for playground use. Small pieces of playgrounds were tried out with samples of the various grades of oil. The aim was to obtain an oil that would not be too heavy, but which would blend properly with the rock and sand. Again, we found that the oil must not be too light, or profuse bleeding results on the surface. The top surface of sawdust, a most important part of the surfacing material, was obtained from Memphis, Tenn. The specifications now in use seem rather heavy for an ordinary school playground, but the surface is strong enough to hold up a school truck which may travel across the grounds.

Specifications for the Santa Monica Playground Surface

The following are the specifications for use in obtaining the Santa Monica Cushion Surface:

Prepare the subgrade by bringing the same to the true line and grade, so that there will be a proper drainage of all water from the surface, and so that no pools will remain standing on the finished asphaltic surface after a rain.

After the subgrade has been completed, the surface is wetted and rolled with a straight-surface roller (not crowned), weighing not less than eight tons, until the earth ceases to creep in front of the roller and until it presents a finished, even surface. To avoid creeping in front of the roller, it may be necessary to plow or scarify the entire surface to a depth of at least 4 in. previous to rolling.

Next, the surface is covered with a layer of crushed rock (approximately 8 pounds to the square foot) that will pass a 2-inch mesh screen and will be retained on a $\frac{3}{4}$ -inch mesh screen. The rock is then wetted, rolled, and forced into the surface about one third of the diameter, which presents a solid, uniform surface.

Upon this surface spray asphaltic oil, specific gravity 1.0 min.; flash of 485 min.; penetration at 77 deg. F., 100 grms. 5 sec. 110-120; melting point F. 105 min.; cm. ductility at 77 deg. F. 185 min., or equal. Apply the oil at the rate of not less than three fourths of a gallon per square yard of surface, at a temperature of between 350 deg. F. to 485 deg. F.² The oil must be applied with a pneumatic-tired, pressure-spraying machine, using the header or the hose-and-nozzle attachment. Then roll with a wet roller.

Upon this surface a layer of crushed rock is spread at the rate of approximately 2 pounds to the square foot. The rock should pass a $\frac{1}{2}$ -inch mesh screen, and should be free from dust. It will fill all large voids and will thinly cover the 2-inch rock. If any depressions occur in the work, these must be eliminated by the application of additional oil and rock. The surface is then rolled smoothly and made true to the cross section.

The surface is then sprayed with a lighter asphaltic oil, specific gravity 1.0 min.; flash of 437 deg. F. min. Coc; penetration at 77 deg. F. 100 grms. 5 sec. 25-30; melting point of 150-165; cm. ductility at 77 deg. F. 5.0 min. This oil is applied at the rate of about three fourths of a gallon per square yard of surface, or sufficient to fill all the voids and to obtain a true surface.

This oil must be applied with hose and nozzle, especially arranged so as to draw the oil from as close to the power pump as possible, with a by-pass valve arranged on the shortest possible return to the tank pump. This is necessary to avoid excessive cooling, which will cause the "freezing" of the heavy oil in the hose. As soon as the oil sprayer has passed, and while the oil is still hot, the surface is covered with ground spruce shavings, or sawdust, free from redwood, fine dust, or large pieces which will not pass through a $\frac{1}{4}$ -inch mesh screen. The shavings or sawdust are applied with a scoop shovel and the workmen must be sure to thoroughly cover the

¹The following definitions will help clear up the specifications:
Specific gravity — the weight of the oil as compared with water. This oil (1.0 Min.) has the same weight as water.

Flash (°F.—485 Min.) — the flash test indicates the maximum temperature to which the oil can be safely heated. At a certain temperature, in this case at 485 deg. F., inflammable vapors are given off.

Penetration is the consistency of a bituminous material expressed as the distance that a standard needle vertically penetrates the material. In this case the temperature of the material (Markel Pen, at 77° F., 100 grms. 5 sec. — 110-120) is 77 degrees F., the needle is under 100 grams pressure, the given time is 5 seconds, and the distance of penetration is 110-120 hundredths of a centimeter. For this test, an instrument called a penetrometer is used.

Melting point 105 degrees F. min. indicates the minimum temperature at which the oil begins to melt.

Ductility is an indication of the binding qualities of asphalt and its resistance to shock. It is measured in centimeters by the distance to which it will stretch when the ends of a piece are pulled apart. In this case, at 77 degrees F. the material stretches a minimum of 185 centimeters.

(Concluded on Page 130)

What Rights and Powers Have Schools for Taxation?

Wayne W. Soper, Ph. D.

Two phases of the rights and powers of school officials with respect to taxation were developed in the writer's previous article* on taxation: (1) the nature and source of the taxing power of the school district, and (2) persons and property taxable and the place of taxation. Such questions were answered as:

Has the district inherent right to tax?

Where is the taxable situs of the property of the resident, the nonresident, and the alien taxpayer, if such property is located within the district?

Where is property to be taxed that lies in more than one school district?

What constitutes the domicile of the taxpayer?

What effect has the transfer of the property from one district to another?

Does the remoteness of the property from the school center affect the tax?

This discussion will recite some of the salient principles involved in (1) persons and property exempt from taxation, and (2) levy an assessment of school-district taxes, and (3) rights and remedies of taxpayers.

Persons and Property Exempt from Taxation

The research report of the National Industrial Conference Board for 1923 reveals the fact that, in 1921, the extent of the value of property exemption in the United States had reached the appalling figure of 54 billions of dollars, or slightly less than 20 per cent of the national wealth. When one fifth of the nation's wealth is relieved of taxation, the remaining four fifths must bear a heavier burden. Over one hundred different species of property in the states taken as a whole are exempt, one state exempting some species that others do not, and taxing some that other states exempt.

Boards of education and school administrators should have some definite knowledge on property exemptions, both from the standpoint of clearly keeping within the law with respect to property for which they are responsible and of having command of the situation with respect to all property which should be furnishing its share of the public-school burden. If property is exempt, it cannot be required to contribute revenue in the shape of taxes; but, if it is hiding under an assumed exemption, it should be discovered and compelled to contribute its share of public revenue. Judging from the number of cases where exemption has been resolved against institutions and property claiming exemption, there must be considerable property now claiming exemption which legally is not exempt.

The source of the power to exempt is the state, and not the school district. This right may not be delegated to the district in the same manner as it is delegated to municipalities, because school taxes are in fact "state" taxes, raised locally for local support of the schools. The district is an agent acting for the state.

Exemption Statutes Classified

Statutes in the different states vary as to the basis for the exemption of property. They may be classified into the following groups:

1. Those statutes prescribing that ownership of the property by a certain institution or class of people be the test for exemption;
2. Those statutes making the particular use of the property rather than ownership the test;
3. Those statutes making both ownership and use the test.

If the exemption is based solely upon the ownership of the property, it is possible that property may be owned by an exempt institution, such as a school, and not used for the same purposes as is the larger part of the institution's property, and still be exempt. Under such conditions, a church might own a residence

from which it derives rental profits, and this residence would be exempt under a strict interpretation of the statute. But, on the other hand, if the use of the property is the test, it makes no difference who may own the property, but the use to which it is put that determines whether it is or is not exempt.

While courts in all instances have favored a strict interpretation of the exemption statutes when private property is concerned, there is a growing number of decisions in which a liberal construction is favored with respect to educational, charitable, and benevolent institutions.¹

Persons Generally Exempt from Taxation

Individuals who, on their own account, and not because of the property they own, are exempt in some states include ministers and priests, widows, orphans, aged and infirm people, deaf-mutes, the blind, the indigent, veterans, soldiers and sailors, Indians, and firemen. This may mean that they themselves are relieved of capitation or income taxes, or that certain forms of their property are not taxed. As a general rule, the real property of no individual escapes taxation, and seldom does the personal property. But statutes vary in the different states. The reasons for exempting the blind, the indigent, and the orphaned is that the state usually cares for such unfortunates, and a tax on them would only necessitate granting them an allotment with which to pay their taxes. Veterans, when exempted, are relieved of taxes on the ground of having rendered a commensurate public service, thereby encouraging the rendition of a similar service when the need arises in the future.²

State and Federal Instrumentalities

Under our existing form of government whereby two separate sovereignties operate within the same territorial limits, for one to have the power to tax the agencies of the other, would soon destroy the dual existence of those governments, the more powerful taxing the other out of existence. Hence, "it is well established on reason and authority that neither government can interfere with the functions, agencies or instrumentalities of the other, and neither can levy a tax on the property, officers, agencies, or instrumentalities as such of the other."³

Public-School Property

It is necessary in most jurisdictions that school property be under the immediate control of the board of education to be exempt from taxation. Property leased by a board in which to hold school, but the title to which remains in the owner of the fee is subject to taxation.⁴ With the rapidly expanding school program and the common necessity for temporarily leasing additional buildings for classrooms, boards of education should be advised that this leased property is taxable. In like manner, property belonging to the school district, but rented to another person for purposes other than public education, becomes subject to taxation.

Colleges and Universities

The statement that the property of the educational institutions is exempt from taxation is highly misleading. The layman at once assumes that all such property is exempt. If he were asked the following questions, what would his answers be:

Does ownership or use generally control the exemptions of such institutions?

What is meant by "educational purposes"?

¹State vs. Trustees of William Jewell College, 234 No. 299.

²State vs. Snyder, 212 P. (Wyo.) 771.

³Grayburg Oil Co. vs. State, 286 S.W. (Texas) 489.

⁴Pace vs. Jefferson County Com'rs, 20 Ill. 644.

Is contiguous property used by the institution exempt? Noncontiguous?

Are residences of officers and teachers located on, or near, the campus exempt? Not located on or near the campus?

Does incidental profit from tuition, or use of property, defeat the exemption?

Is the property of the institution which is rented to others exempt?

If part of the property is used for other than educational purposes, is the whole deprived of exemption?

Let us outline the principles upon which the answers to these and other questions can be made.

Whether use or ownership governs depends upon the statutes. If the statute reads that all property of such institutions is exempt, the use made of that property is not very material. Where the statutes read that "all property used for religious, literary, scientific, and educational purposes" shall be exempt, the ownership is immaterial.

"Educational purposes" generally means all those purposes necessary to carry out the objects and perform the functions of the institution.

Contiguous property owned and used by the institution, reasonably necessary to the accomplishment of the purposes of the institution, is exempt. Noncontiguous property may or may not be exempt, depending upon the distance and the uses to which put.⁵

The general rule regarding residences of officers and teachers, if located on or near the campus, and if devoted exclusively to the purposes of the institution, is that they are exempt.⁶

That a private school charges tuition, does not deprive it of the exemption privilege on that account. The "test is not whether there may be a profit, but whether the school is conducted for the purpose of making a profit."⁷ Private schools organized for profit are taxable in most states.

Property owned by an educational institution, but rented to others for profit, is generally taxable, although there are contrary decisions in some states.⁸ The fact that part of the property of an educational institution is not used for educational purposes, does not deprive the whole institution of exemption, although the part not so used becomes taxable.⁹

Religious Societies, Charitable Institutions, and Fraternal Orders

With respect to these organizations and their property, the general rule is, that all property used exclusively for the purposes of the institution is exempt; property not so devoted is taxable.¹⁰ The part of a church building rented for profits with which to pay a mortgage; Y.M.C.A. property used for a public eating house; lodge rooms rented out for stores and other purposes becomes thereby taxable. Parsonages are not always relieved of taxation along with the churches. Fraternal orders have difficulty earning exemption, because (1) a large part of their functions is social, (2) much of their property is leased to others for profit, (3) the benefits derived from their dues are distributed not to the public in general, but to their own membership.¹¹

Hospitals, Asylums, Libraries, and Museums

The one general basis upon which hospitals can claim and acquire exemption from taxation

⁵State vs. Carleton College, 191 N.W. (Minn.) 400.

⁶Wheaton College vs. State 46 Iowa 275; Same vs. Town of Norton, 122 N.E. (Mass.) 280.

⁷Borough of Princeton vs. Board of Tax Ass'rs, 115 A. (N.J.) 342.

⁸Stahl vs. Educ. Ass'n. M.E. Church, 54 Kans. 542.

⁹In re Syracuse University, 212 N.Y.S. 253.

¹⁰School of Domestic Arts and Science vs. Carr, 322 Ill. 562.

¹¹In re Masonic Temple Society, III S.E. (W. Va.) 637; I.O.O.F. vs. Burke, 126 N.Y.S. 944; Appeal of Scottish Rite Building Co., 182 N.W. (Nebr.) 574.

is the manner in which the institution is organized and carried on. If conducted as a business enterprise, with the understanding that profits are to be divided among certain individuals, they are not exempt. The fact that they dispense charity to a limited number of people is immaterial.¹² "The theory upon which charitable hospitals are exempt from taxation is that their chief object and accomplishment is to care for those who would otherwise become charges upon the state or society."

Asylums, libraries, and museums are generally exempt from taxation. Generally they are state institutions and exempt on that account.

Cemeteries and Mausoleums

"The obvious impropriety of selling the graves of the dead to pay the expenses of carrying on the government of the living" is said to be one reason for not taxing cemeteries. Such property, when used exclusively for burial purposes, is exempt in every state. With respect to that part of a cemetery not devoted to burial purposes, the statutes and decisions are not in agreement. In some instances, the unoccupied land is taxable; in others, it is not. But other property owned by a cemetery association and from which it derives profit to assist in maintaining the cemetery is taxable.¹³

However, to organize a business similar to a cemetery association, and to expect it to be exempt under cover of such similarity, is more than some states will tolerate. In New Jersey, builders of mausoleums claimed exemption on the grounds of being part of a cemetery association. The court bluntly passed judgment against the claim, and ruled that no purely commercial organization could hide under this exemption privilege.¹⁴

An exemption from taxation for any purpose is a personal privilege conferred upon an individual or institution and does not carry with it the right of transfer or assignability. Property formerly exempt from taxation but sold to a person or company in whom exemption is not vested, or for purposes not included under the exemption statutes, loses the exemption privilege. The state may recall the exemption right unless in so doing the obligation of a contract would be impaired.

Levy and Assessment of School-District Taxes

Prerequisite to any collection of a valid tax upon the property of a school district are two indispensable acts. The first of these is the levy; the second, the assessment. The levy is a purely legislative act, the formal vote of the body authorized to make it. Assessment is the process by which persons subject to taxation are listed, their property described, and its value ascertained.

The vote of the people at the annual school meeting alone is not sufficient to create a valid levy. They may give their authority, by their vote, to levy the tax; but the board of education alone can execute the power of declaring the tax levied.

The Making, the Validity, and the Requisites of Levy and Assessment

In the first place, the validity of any tax is based upon a valid levy upon which is dependent a valid assessment.¹⁵ Along with these must appear a written record of the different proceedings. Legislative acts to be performed by the board are generally mandatory, but the courts will sustain a levy though technically defective, whenever there is sufficient proof to make the intent of the levying body conformable with

¹²City of San Antonio vs. Santa Rosa Infirmary, 249 S.W. (Tex.) 498.

¹³Mt. Pleasant Cemetery Co. vs. City of Newark, 8 A. (N. J.) 448; State vs. Crystal Lake Cemetery Ass'n, 193 N.W. (Minn.) 170.

¹⁴Mausoleum Builders of New Jersey vs. State Board of Taxes and Assessments, 100 A. 236.

¹⁵Bennett vs. Finkbine Lumber Co., 199 Iowa 1085.

the law.¹⁶ Ministerial acts are directory and usually do not affect the validity of the levy.

Taxes Levied in Excess of the Legal Limit

Laws have been passed to prevent tax-levying bodies from imposing a burden too heavy upon the taxpayers. The question here is not, can districts go beyond this legal limit, but, what is the outcome, if they do exceed the legal limit? Is the levy void in whole, or only in part? Obviously, the principle "illegal in part, illegal as a whole" would work numerous hardships on school districts inadvertently exceeding the legal tax limit. Fortunately, a long series of decisions casts its whole weight on one side. Taxes levied in excess of the legal limit are void only as to the excess, unless the illegality so permeates the whole tax that the legal cannot be separated from the illegal tax.¹⁷ It should also be remembered that the limitation placed upon the amount of taxes that can be levied in any one year does not limit the amount that can be expended for a certain purpose over a period of years.

But it is possible to keep well within the legal limits of taxation, and still levy a tax that is excessive or even fraudulent. It has become a matter of public policy not to interfere with the discretion of the board of education, unless there is manifest abuse of the power reposed in it. There is always the presumption that the tax is just and that the board has acted in a faithful manner. Therefore, the burden of proof that a board acted improperly or fraudulently is squarely upon the one claiming such misconduct.¹⁸

Back Assessment and Omitted Taxes

Property escapes taxation through both intent and inadvertence. Delinquent taxes are those accrued and due, but unpaid. They have been levied, but collection of them has failed. Omitted taxes, on the other hand, result from failure to list and assess the property on which taxes are payable. In order to collect this lost revenue, "back assessment" of the property is necessary. The question at once arises, at what valuation shall omitted property be back assessed? The question can be answered only in the light of legislative enactments in the various states. They may prescribe that the valuation be as of the current tax year. Or, they may require that the valuation as of the omitted year be applied. The general rule is that the valuation is left to the discretion of the assessor.

The fact that school expenditures have been paid for the years in which taxes were omitted on certain property, or that the particular school purposes for which the taxes were levied no longer exist, or even that the collection of the omitted taxes may create a surplus in the school fund — none of these facts presents any legal grounds why such property should not be "back assessed." When collected, such taxes may be appropriated as any other surplus, and thereby lessen the burden on other property

¹⁶Smith vs. Hurlburt, 108 Or. 690.

¹⁷Kirchner vs. Wapsinonoc School Tp., 118 N.W. (Ia.) 51.

¹⁸People vs. Bates, 107 N.E. (Ill.) 123.

which has borne more than its rightful share of the tax burden for certain years.¹⁹

Rights and Remedies of Taxpayers

The delinquent taxpayer always has an excuse for nonpayment of his taxes. Whether his excuse matures into a real defense, depends upon it and upon the law of the commonwealth. Some of his best defenses are that:

- a) He has paid the tax,
- b) His property was exempt from taxation,
- c) The collector was without authority to collect,
- d) He had no interest in the property at the time of levy,
- e) The levy or assessment had an element of fraud,
- f) No election (where required) was held,
- g) The district was unorganized at the time.

But the taxpayer may not maintain an action that:

- a) He has a claim against the district to offset his taxes,
- b) He entered the district too late to participate in the election of trustees, or too late to vote for the levy,
- c) There were inequalities in the assessment,
- d) He was taxed in the wrong situs (unless statutes provide specifically for this action).

The chief type of legal action the taxpayer brings against the board of education, is that one wherein he prays to prevent the tax from being collected. He is in no sense a delinquent taxpayer, but for some reason desires to stay the hand of the collector. Injunction is a frequently employed legal means of doing this. But, injunction cannot be employed, when there are other remedies at law. It can always be used to prevent the collection of an illegal tax. It may also be employed where it appears that the tax will exceed the statutory limit.

Injunction cannot be employed by a taxpayer merely to restrain the collection of a tax, because there appears to be irregularities in the proceedings incident to raise the tax. It may not be used to interfere with the discretion of the taxing officers in the absence of fraud.

In the collection of illegal school taxes, where property has been taken to satisfy a tax claim, the taxpayer may recover not only the amount of the tax he was compelled to pay, but may also recover the amount it cost him to redeem his property. The action maintained is one of trespass for illegal seizure of property. The taxpayer must constantly bear in mind the fact that upon him falls the burden of proof in all actions seeking to enjoin a collection of taxes on the grounds of void election, unauthorized tax, excess of legal limit, and other unlawful proceedings.

Recovery of Taxes Paid

The recovery of taxes paid by mistake in the wrong district is a matter of difficulty from the angle of the taxpayer. The weight of authority leans to the rule that to warrant a recovery of money paid by mistake, the tax must have been illegal and void and paid under protest. Where the objector has full access to the tax books and all facts pertaining to the tax, and pays voluntarily, he must bear the burden of showing that the tax was illegal to warrant the recovery of his money. The mere matter of paying the tax in the wrong district, or having the property assessed in the wrong situs, will not warrant a recovery of the tax in most jurisdictions.²⁰

With respect to the estoppel rights of taxpayers, the following principles have been deduced from the mass of legislation and decisions on this phase of the taxpayers' rights. These principles are: (1) That the taxpayer, even though he has participated in the proceedings to establish the tax in his district, and has even paid it without complaint, is not estopped to question its validity in the face of reasonable evidence that it may be illegal; (2) That the taxpayer is estopped from denying the regularity of proceedings to which he was a party.

¹⁹Hopkins vs. Van Wyck, 80 Md. 7; Anderson vs. Ritterbusch, 98 P. (Okla.) 1002.

²⁰San Diego Land Co. vs. La Presna School District, 122 Calif. 98.

— William C. Bagley.



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Logic in the Planning of Elementary Schools

H. Errol Coffin

School standards, such as proper orientation, classroom floor space per pupil, relation of window to floor, and others mandatory in states having school codes, are general knowledge and for our purpose we may assume they are incorporated in all public schools now being planned.

There are, however, basic and more subtle elements to be considered if we are to achieve economic and esthetic results.

The Importance of the Site

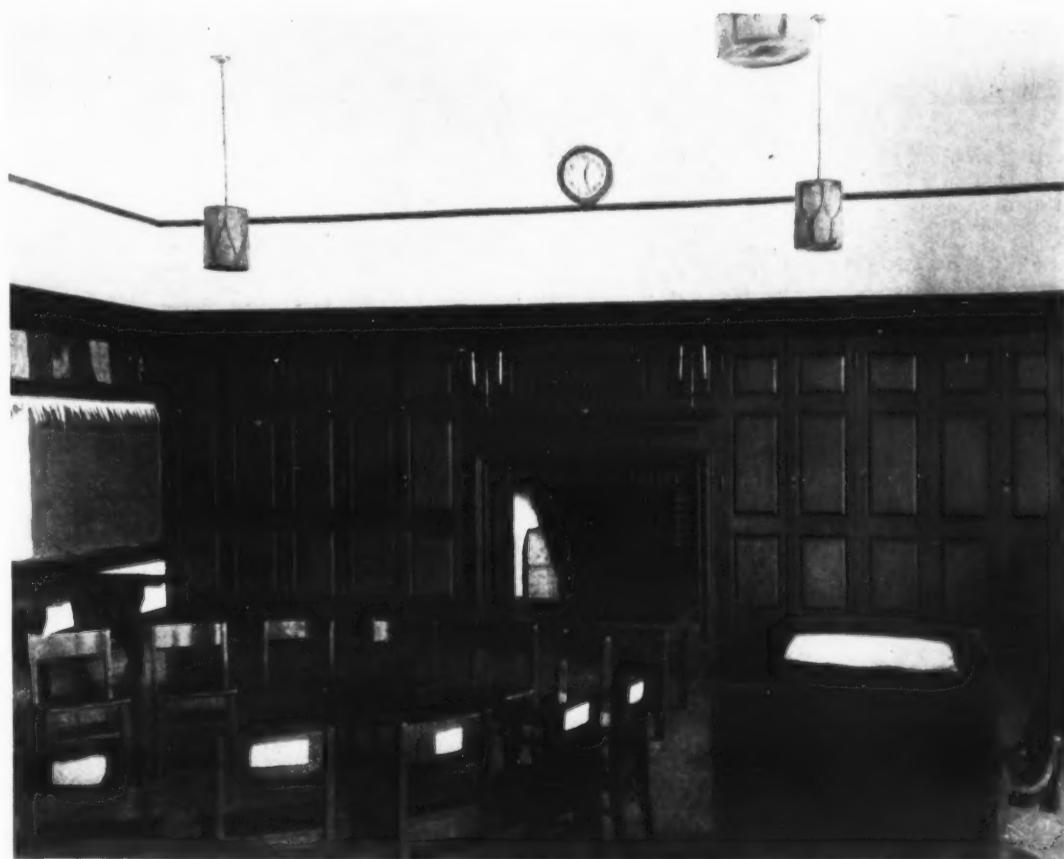
After establishing the general plan requirements, it is of paramount importance to devote a great deal of attention to the site, in order to determine what building silhouette and mass will appear best and will conform naturally and inexpensively to the site. The Byram School at Greenwich, Conn., located on the summit of a hill has low, one-story flanking wings which aid to bring the building down into the hill, thereby maintaining a continuity of the profile. The school at Glenwood Landing, N. Y., on a level site, has higher wings and needed only slight differences of ridge heights to break the monotony of line. The site at Locust Valley, N. Y., on the corner of two equally important roads seemed to need a building which expressed this corner location with entrances from each road converging to a dominant tower.

Having determined generally the desired mass, the next step is to ascertain how the specific-plan elements may be arranged to attain economically and reasonably the preconceived building, bearing in mind the recognized standards and a style of architecture.

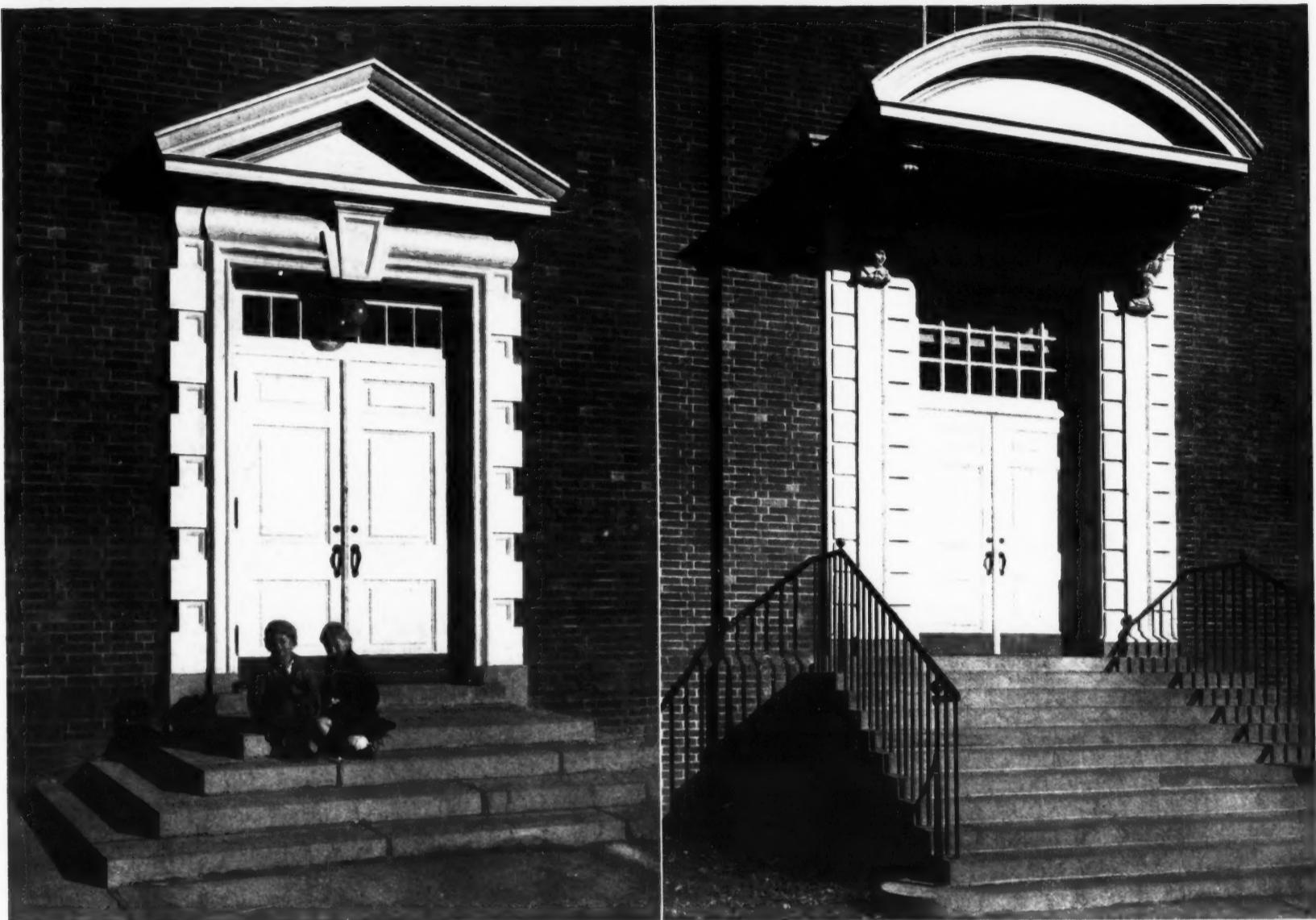
The major component parts of the usual elementary school, not listing toilets, corridors, stairhall, and supply rooms may be designated

as follows: (1) space for mechanical equipment; (2) standard classrooms; (3) kindergarten department; (4) special rooms of in-

struction such as manual training and household arts; (5) lunchroom, or cafeteria; (6) rooms of administration such as clerks' and principals'



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AUDITORIUM ENTRANCE

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MAIN ENTRANCE

offices, clinic and teachers' rooms; (7) auditorium and gymnasium, or playroom, either separate, or combined with their adjuncts such as foyer, stage, shower, and locker rooms.

The high school with more special rooms is easier to arrange into an architecturally interesting building than the elementary school. However, the divisions listed above, having distinct uses, can with sufficient study be arranged to obtain the desired mass and should be separated for proper school usage.

It is usually acknowledged ideal to place below grade only rooms for mechanical equipment and storage. Accepting this, all other usable space is located on first and second floors. The standard classrooms, dominant units of the elementary school, placed so they face east or west, form the focal unit around which the rest of the building is arranged.

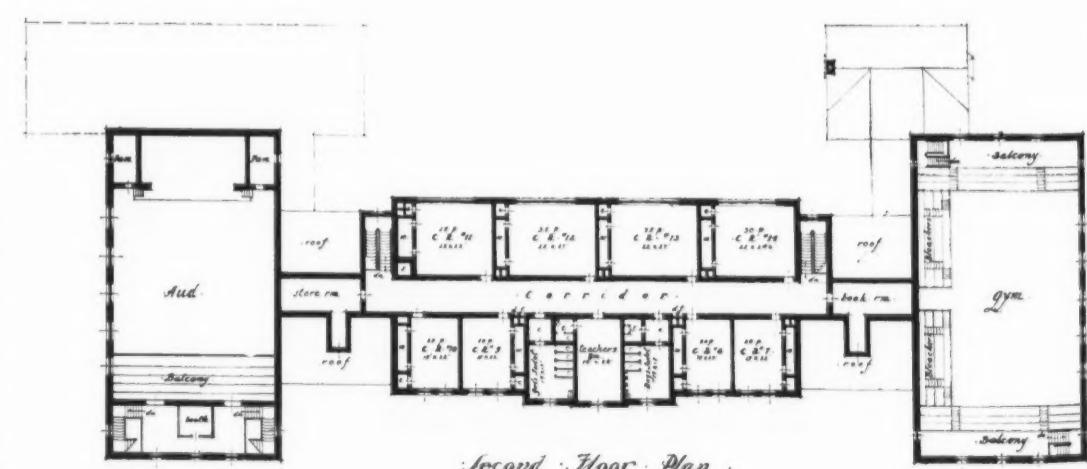
The manual-training and kindergarten rooms should preferably be faced north and south respectively, with separate entrances, and because of the noise emanating from them should be segregated as distinct units.

It is desirable to have the cafeteria adjoin the domestic-science department so that the teacher may readily supervise the food preparation.

The offices are well situated if they adjoin the principal entrance, thereby affording them a dignified and central location.

The auditorium and gymnasium should be so placed that they can be conveniently used by the school, and still be available to the local residents, without the necessity of disturbing heating or lighting in the rest of the building.

In the schools illustrated, these practical planning considerations were utilized to obtain the desired masses as exemplified in the segregated shop and kindergarten of the Byram



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School and the flanking auditorium and gymnasium of the Glenwood Landing School; both symmetrical buildings. The Locust Valley School is unsymmetrical with a corner tower starting from the octagonal foyer, on the first floor, from which radiate the rooms of administration, auditorium, kindergarten, and classroom corridor. The octagon on the second floor serves as a cafeteria, with adjoining rooms of domestic science and household arts. At the other end of the school, near the playground or the gymnasium and shop. This school conforms to the topography of the ground so that although the gymnasium is above grade, it is still a story below the first floor.

In all of these schools, the kindergartens face south, are segregated, and have separate entrances and toilet facilities.

Economy Through Multiple Use of Rooms

We may economize in junior and senior high schools by the multiple use of rooms. This is not possible in the elementary schools, except in the combining of auditorium and gymnasium which is never completely satisfactory. Inasmuch as economy is, and should be, an important consideration in these days of advancing school cost, the question arises as to how this may be accomplished, still using durable construction and desirable fixed equipment. The answer is in arranging the school to fit the site, thereby limiting to a minimum the excavation and grading; compact planning and simple architecture.

The schools built outside of our larger cities, if of the pitched roof type, usually fit into their surroundings well and do away with the troublesome parapet walls. The spaces under these roofs should be used to a greater extent. Although not suitable for classrooms, they make good play spaces, lunchrooms, and teachers' rooms if properly ventilated and lighted either by dormers or skylights. The cafeteria of the Locust Valley School is lighted by the cupola surmounting the tower. Excellent teachers' rooms were obtained in the attics of the Uniondale and Locust Valley Schools. In both these buildings the side walls of the auditoriums were kept lower by extending the rooms in height up into the pitched roof areas.

The accompanying photographs are of schools of Colonial architecture inspired by the English Georgian. This style of architecture is well adapted to schools in most sections of the United States not only because of its economy, but also because of its suitability.

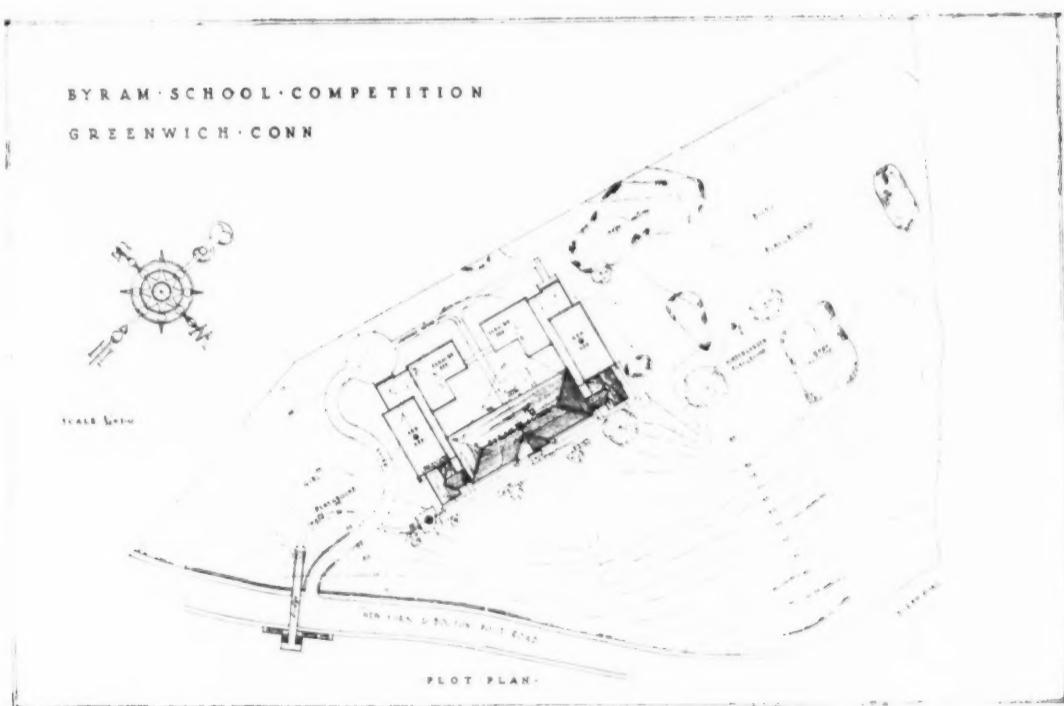
It is economical inasmuch as it is best handled with restraint and needs but little ornamentation to look well and be in type. The interest may be obtained by skillful design in the handling of the mass and fenestration, and by concentrating the ornament at dominant points.



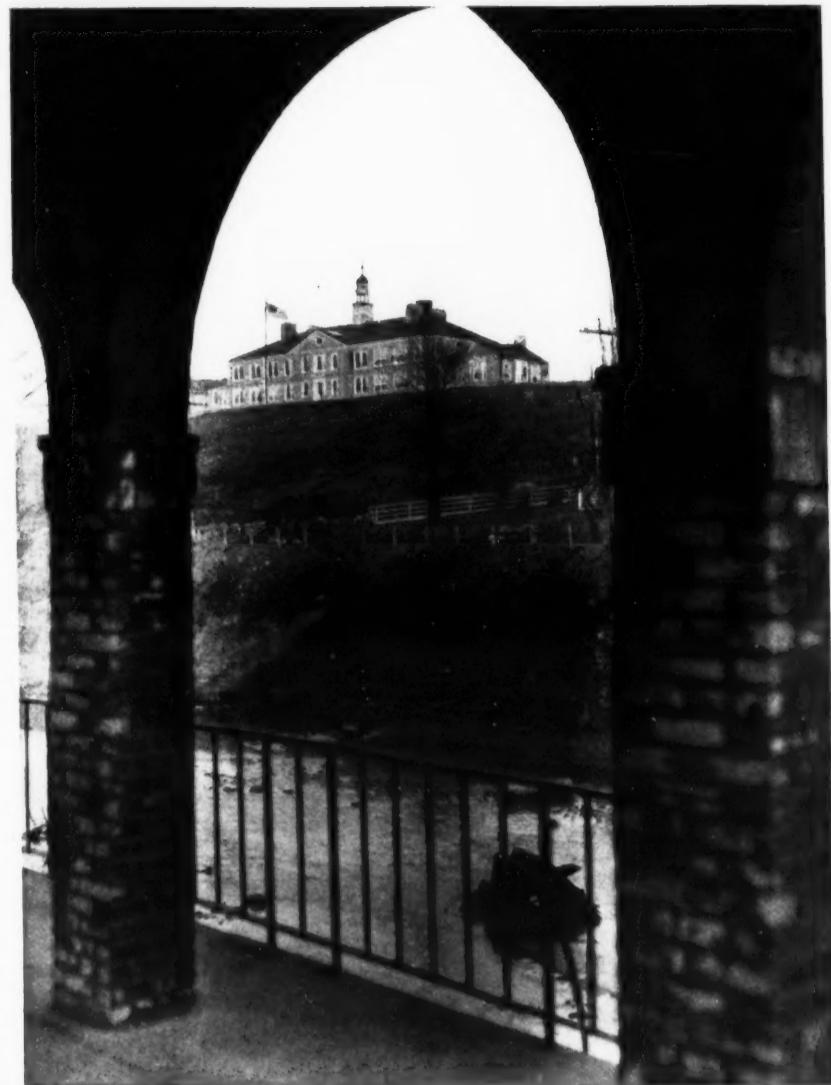
FIREPLACE IN KINDERGARTEN



CENTRAL BAY, BYRAM SCHOOL, GREENWICH, CONNECTICUT

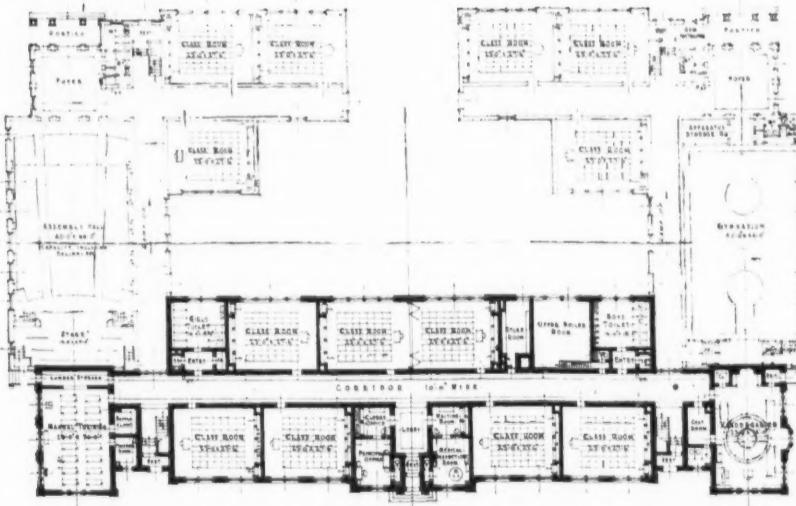


PLOT PLAN
BYRAM SCHOOL, GREENWICH, CONNECTICUT
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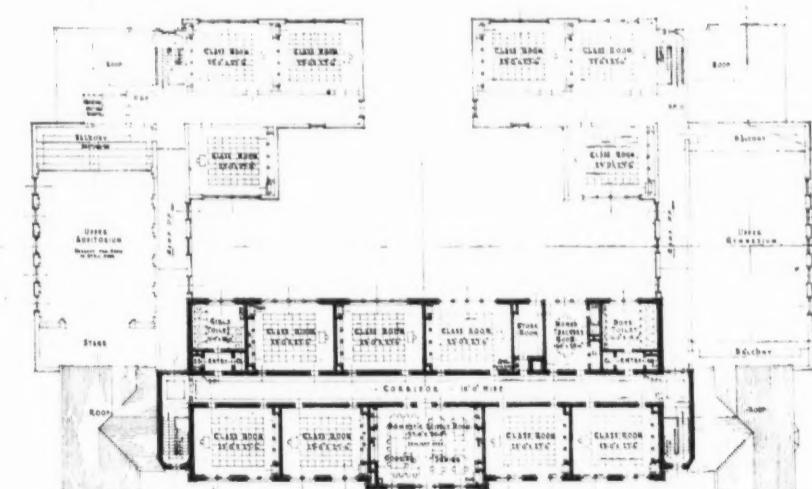


GENERAL EXTERIOR VIEW

MAIN ENTRANCE
BYRAM SCHOOL, GREENWICH, CONNECTICUT
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FIRST FLOOR PLAN



SECOND FLOOR PLAN

This ornament and architecture may have a significant, historical, and educational value to the children as illustrated by the boy's and girl's heads at the main entrance of the Glenwood Landing School; the eagle over the entrance to the Byram School; and the globe at the portico entrance of the Locust Valley School.

The cupola, with its duck weather vane surmounting the tower, and the porticos of the

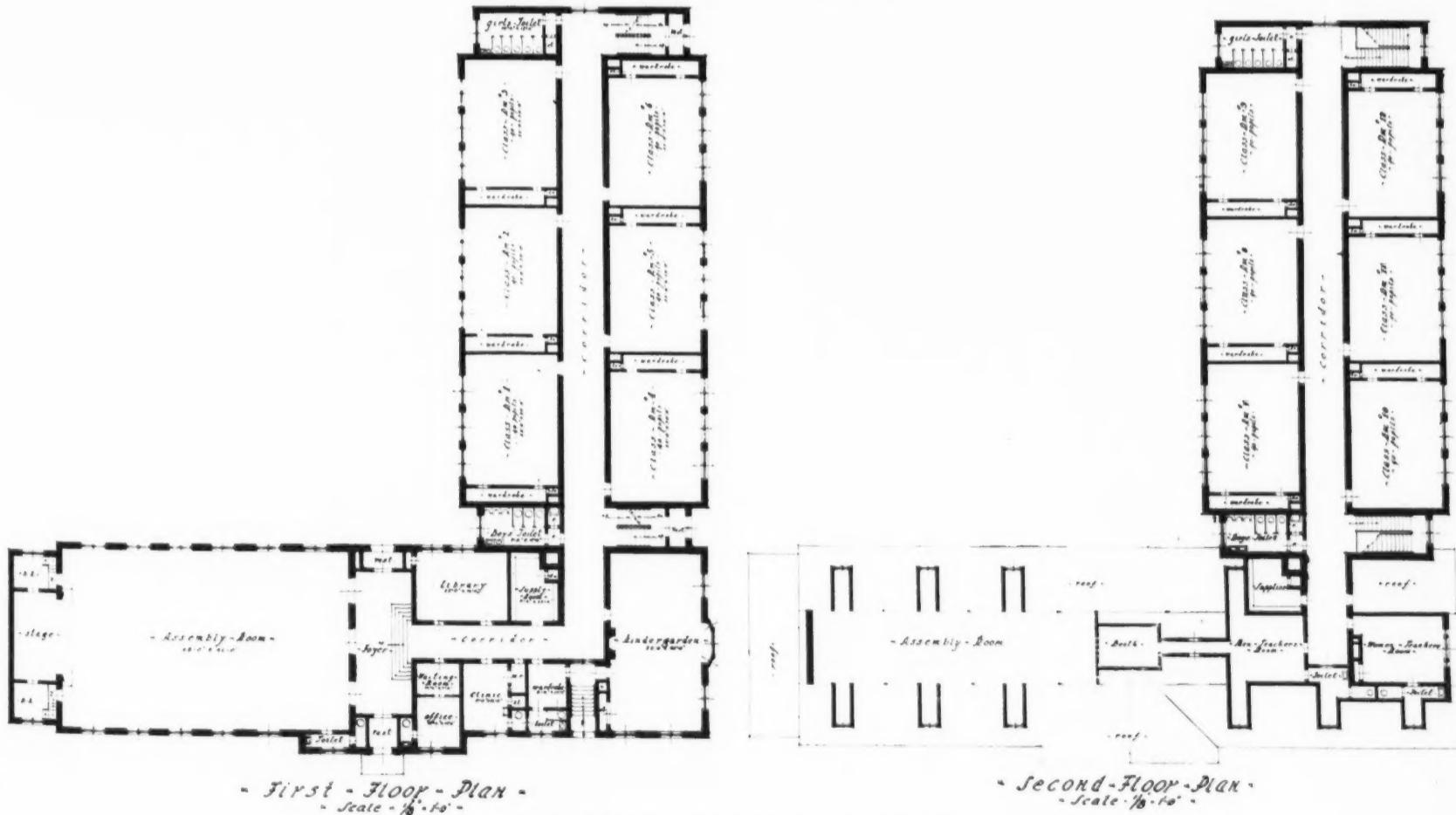
Locust Valley School were inspired by Mount Vernon, Washington's home. On the two gable ends flanking the porticos are a wall sun dial and a modern clock showing the old and the new methods of time telling. There are bronze grilles covering the small windows on either side of the main entrances. In these, conventionalized crabs were used as decorative ornaments, because of the proximity of Locust Valley to

Long Island Sound and not expressive of the attitude of the board of education, as one of its members jokingly suggested. As a matter of fact, their attitude was exactly the reverse as evidenced by the fact that two of the members were so greatly interested in the building that they contributed individually the sun dial and the clock.

The front façades of the auditorium and gym-



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UNIONDALE SCHOOL, EAST HEMPSTEAD, NEW YORK
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nasium of the Glenwood Landing School were patterned from the Pohick Church in Virginia attended by Washington.

Colonial Architecture Conforms to Neighborhood

Colonial school architecture may be domestic in scale and general character rather than monumental, thereby conforming more nearly to the

homes of the neighborhood and becoming more like a home for the pupils rather than an institution.

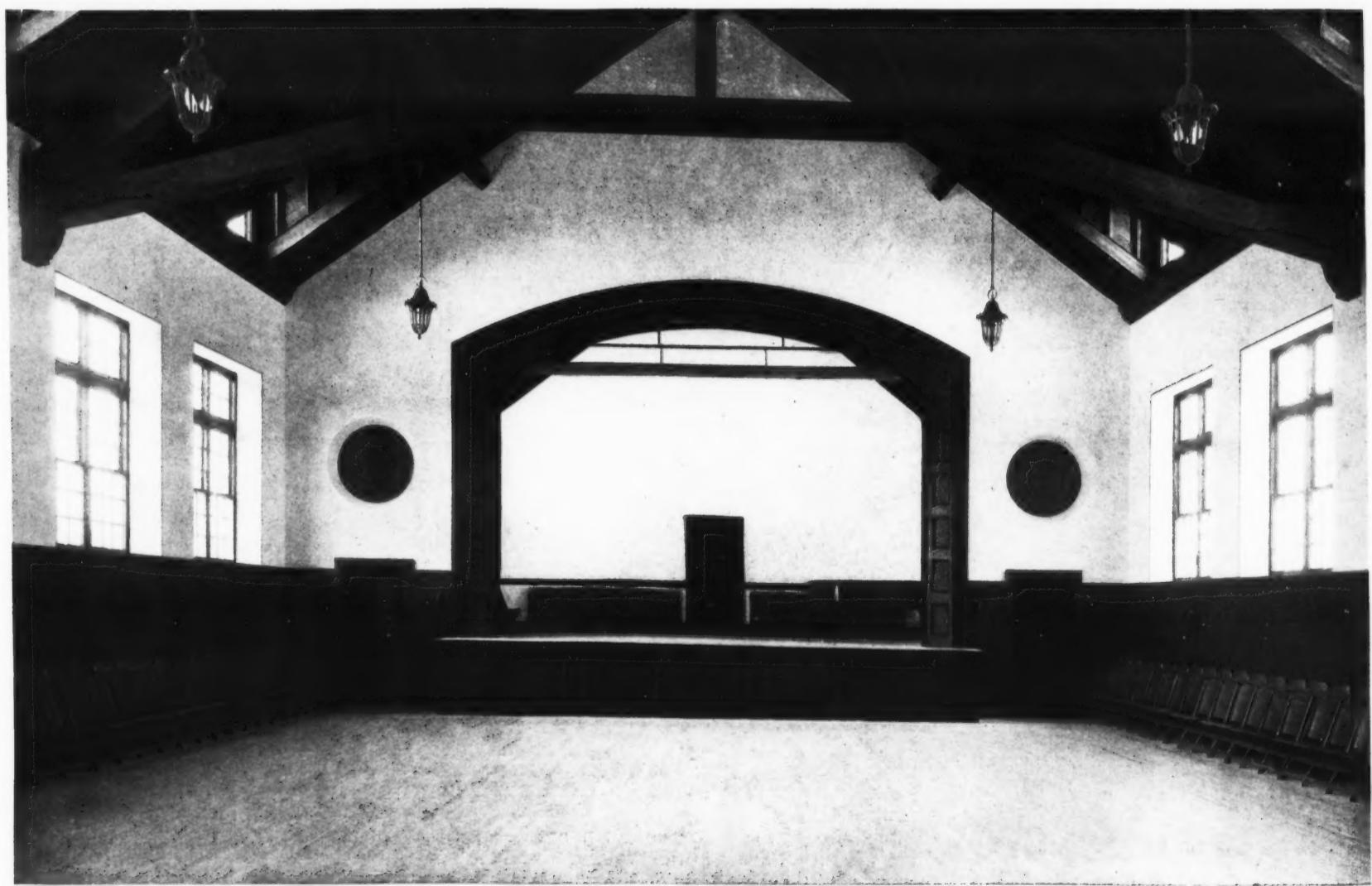
Aside from practical consideration, architecture of early Connecticut inspiration seemed appropriate for the Byram and North Mianus Schools as the slogan of the town is "Greenwich the Gateway to New England."

The North Mianus School which is similar in general plan to the Byram School, demonstrates how a plan may be maintained if varied sufficiently in architecture to fit the second site. These two schools were finished and equipped identically, thereby simplifying administration, maintenance, and repair.

The school at Uniondale, N. Y., is nearer the



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COMBINATION AUDITORIUM AND GYMNASIUM, UNIONDALE SCHOOL, EAST HEMPSTEAD, NEW YORK
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GYMNASIUM WING, LOCUST VALLEY SCHOOL, LOCUST VALLEY, NEW YORK
Coffin and Coffin, Architects, New York City

English than American Georgian style, but sufficiently allied to be applicable to the type of architecture we have discussed. This school has a combined auditorium and gymnasium containing a balcony with fixed seats. The seats on the floor, when not in use, are loaded on dollies (low carriages) and rolled under the stage guided by tracks. In a room of combined function such as this the usability of the room is largely dependent upon the facility with which the chairs are moved. To make this room serviceable for recreation and attractive for assembly, it was wainscoted in wood to a height of 4 ft. 6 in., the side walls plastered above, and the trusses and framing of the roof left exposed and stained. A building containing a combined auditorium and gymnasium, with a radio speaker installed in each classroom functions much better than such a building without the radio.

Elementary classes are taught in many schools very differently from the way they were five years ago. Instead of the pupils all in rigid rows studying or reciting subserviently to the teacher, they are in groups learning and developing initiative under the teacher's guidance. Some are at the blackboard, while others are studying or discussing their lessons, informally in circles. All are much interested and happy to participate as principals. Many of our state codes require in classrooms windows grouped with small mullions or piers (12 in. and under) between them and a minimum space of varying size from front wall to first window. In classrooms conducted as previously discussed where the children are facing in varying directions,

this window arrangement seems unnecessary. By the use of larger piers you not only obtain a building easier to handle architecturally, but a more economical structure, and further shorten our span, thereby saving considerable in the cost of the steel and its erection.

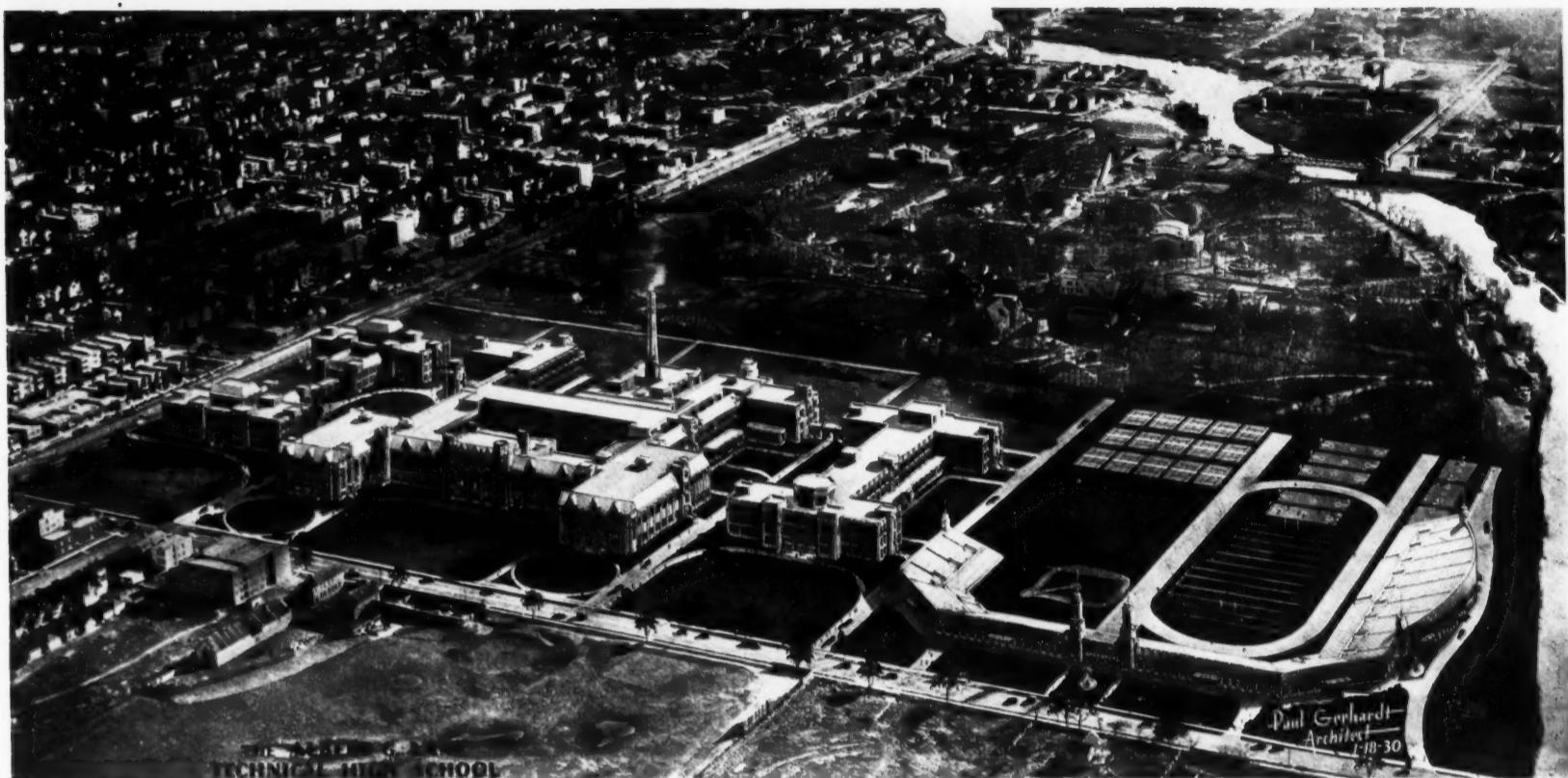
In the opening paragraph mention was made of accepted school standards. These obviously are subjected to change as our teaching methods are altered. Some of the standards of today will not be those of tomorrow. Changes in law are slow and unwieldy; consequently state building or municipal codes should be flexible, and subject to change as quickly as new methods of

teaching and administration have proven advantageous.

The New York City commission on radio education has instituted an inquiry as to the extent the radio has invaded the schools. Of the 1,946 school superintendents in cities of more than 2,500 population who reported, 635, or 32.6 per cent, have radios functioning in 1,606 school buildings. There are 51 educational stations on the air an average of eight hours a week. Of this time, 31 per cent, or two and a half hours are said to be used solely for educational purposes. Together with regular commercial stations the total of educational broadcasting represents 15.2 of the total broadcasting.



LOCUST VALLEY SCHOOL, LOCUST VALLEY, NEW YORK
Coffin and Coffin, Architects, New York, New York

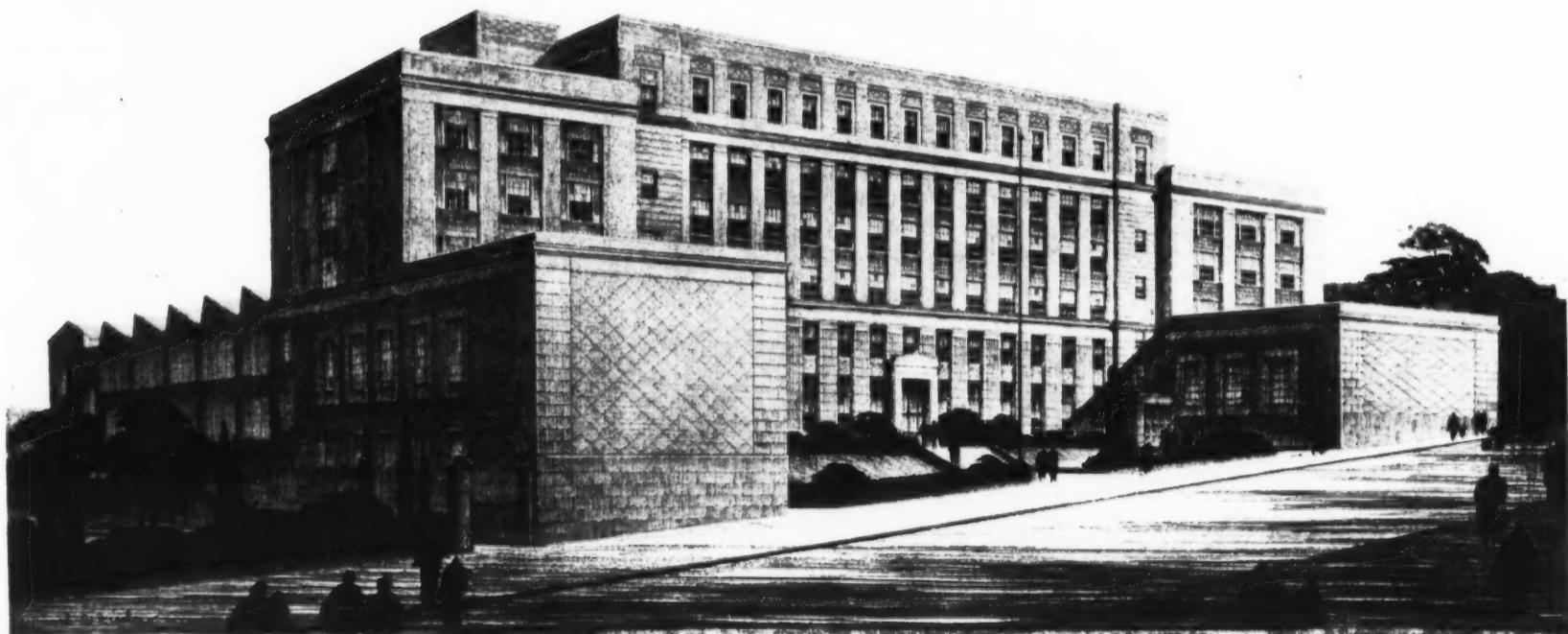


THE ALBERT G. LANE TECHNICAL HIGH SCHOOL, CHICAGO, ILLINOIS
Paul Gerhardt, Architect, Chicago, Illinois

William J. Bogan, superintendent of schools, Chicago, is shortly to see one of his dearest projects completed. Fifteen years ago, as principal of the Lane Technical High School, he started a movement for a "bigger and better Lane," the most important element of which was to be an adequate building. At a recent meeting, the Chicago board of education approved the final plans for a new Lane Technical High School, to be erected at Western Avenue and Addison Street. The new buildings are to care for a normal capacity of 6,000 students. The auditorium is to seat 2,500, and the shops, physical-education unit, lunchroom, and other special facilities are planned for the normal capacity loads. Extreme

flexibility has been sought by the architect, Mr. Paul Gerhardt, for the expansion of the plant and the adjustment of units to a changing curriculum. The original Lane was designed for 1,200 students, but outgrew its building within a year. It is planned that the new plant shall ultimately consist of five separate buildings. For the present, only the large middle building with the shops and power plant at its back end, will be pushed to completion.

Tentative arrangements have been made with a prominent Chicagoan for the purchase of the athletic field and the erection of a fieldhouse as a gift to the school.



CLIFFORD B. CONNELLEY TRADE SCHOOL, PITTSBURGH, PENNSYLVANIA
E. B. Lee, Architect, Pittsburgh

The Clifford B. Connelley Trade School, the latest unit in the secondary schools of Pittsburgh, Pennsylvania, to be completed in September, 1930, will represent a total cost of \$1,308,000 for the building, exclusive of site, and \$700,000 for machinery, furniture, and equipment. The building, which is named after Mr. Clifford B. Connelley, member of the Pittsburgh board of education, was designed by Mr. E. B. Lee, architect, and erected under the supervision of Mr. James Bonar, superintendent of school buildings of the

Pittsburgh board of education. The building has a unique shop section, with sawtooth skylights on the second floor, and special corridors for bringing stock and materials on the first floor. The building costs are distributed as follows: General construction, \$1,600,500 or 2.58 cents per cu. ft.; plumbing, \$89,200 or 2.28 cents per cu. ft.; electrical work, \$85,000 or 2.17 cents per cu. ft.; and heating and ventilation, \$127,570 or 3.27 cents per cu. ft.

The Useful Units for Making Analysis of School Costs

Prof. A. C. Lambert, Provo, Utah

Studies of school expenditures display impressive tables of unit-costs, but contain generally only meager statements of what the many kinds of unit-costs mean. The numerous denominators used currently in cost studies, show that opinion differs concerning the necessary characteristics of a unit which may be used in making meaningful analyses. Is there some one best unit to use in making unit cost studies? Practices prevailing among competent students of school costs should afford some basis for answering this question.

An analysis of 106 published studies of school costs made between the years 1911 and 1929, shows that various types of units are used by those who make major studies in school costs. This group of studies selected for analysis includes 27 reports of surveys made in city school systems, 10 reports of state school surveys, and a large number of field studies in elementary, secondary, and higher education. Some were critical articles on school costs. Taken together these studies represent the work of the best men in the field of school finance. Of the total number, 32 studies are concerned primarily with costs of elementary education, 52 deal with secondary education, and 23 studies are directed specifically to costs in higher education.

Variety of Cost Units

An examination of these studies raises the suggestion that: (1) Unit-costs are difficult to determine satisfactorily. (2) Some students of costs are uncertain about the possible values to be secured from uses of unit-costs. (3) Some writers have little appreciation of what a given unit may mean when it is used. (4) *No one unit can serve all purposes.* It is not improbable that a significant factor which operates in all of the better studies is a knowledge of the prevailing inadequacies in school accounting systems.

A short summary table shows the various types of units used.

TABLE I. Number of Times Various Units Were Used for Purposes of Analysis in 106 Major Cost Studies

Type and Name of Unit	Number of Times Used
Some Unit of Population.....	7
The Teacher	
Number Serving.....	4
Portion of Time Given	2
The Pupil	
Average Daily Attendance	44
Clock-Hour Instructed.....	22
Number Enrolled.....	13
Credit-Hour	4
Attendance-Week	2
Student-Registration	2
Student-Period	2
Semester-Credit	1
Studies Urging Special Units	
For Specific Purposes.....	9
Studies Suggesting Combinations of Units.....	6

One of the more recent studies of the survey type, The Sacramento School Survey, directed by Dr. Jesse B. Sears of Stanford University, again calls attention to the significant fact that cost studies are complicated, and particularly are they so when any attempt is made to allocate the general "overhead" or "indirect" costs to specific departments or functions. Less than 10 per cent of the 106 studies referred to here have made any attempt to report studies of allocated overhead costs, and of this 10 per cent the larger part have to do with higher education. The Gary Survey of 1918 is the outstanding attempt made to allocate indirect costs in a general school system and it shows in a striking way the difficulties which attend any study involving allocation of the overhead.

What Is a Genuine Cost Unit?

The results obtained in these various cost studies reveal the fact that all types of expenditures do not yield clear and meaningful results through the application of any one common unit. Up to date no single comprehensive unit has been as useful as a battery of several units wherever several types of materials and services are to be translated into statements of money cost. It seems safe to say that the value of any large cost study will be increased by the use of several units. Part of the reason why this last statement is sound appears when one states what is meant by a unit-cost.

Remembering that dollar costs are themselves unit-costs, that is, fractions of wealth exchanged for goods and services, it can be said that a *unit-cost is some division or multiple of a service or a material used in the school system stated in terms of the dollars expended for it.* Any unit is a device derived to tell how great an amount of any thing is taken and to be distinguished from the total amount of that thing. A unit is a quantity set up as a standard by which to compare one amount with other amounts of the same kind. If a unit is to have meaning and utility, it must be logically related to the thing measured, and must, in the hands of competent users, give results that are accurate, simple, understandable, and constant.

In determining school costs, as in other forms of measurement, the unit used should have at least three qualities. It should have *validity*, and measure that which it purports to measure, isolating at each successive application the same thing. It should have *reliability*, and give identical results when different workers use the same data and when the same workers apply it to similar data on different occasions. It should have *objectivity* and be, so far as possible, independent in its nature of the opinion or whim of the user. In its definition it should reduce estimation to the minimum, and in its use it should give results that can be recorded, tested, and verified.

Cost-Units Must Be Specific

If these general principles are accepted, it follows that good units for purposes of studying school costs will be those specific units evolved out of experimentation with real data and in the face of real problems where meaning has to be brought out of some particular mass of data at hand. It follows also that no one unit can be the best unit for measuring different materials and services. If these principles are applied, dollar costs for heating will be divided into units on one basis, as for example, "per square foot of equivalent direct radiation," and the dollar costs for operating school busses will be divided into units on another basis as, for example, per pupil-mile traveled on pavement. On this basis statements of comparative costs can be made meaningful.

As early as 1915 Bobbitt¹ urged the wisdom of making use of several units, each specifically related to some function or object. To some degree he illustrated the application of this doctrine in the Denver survey. This good advice has been repeated at intervals ever since by writers² whose experiences in making extensive cost studies entitle them to consideration.

Many of the arguments over "unnecessary,"

¹J. F. Bobbitt, "High School Costs," *School Review*, XXIII: 505-534.

²F. J. Bachman and R. Bowman, *The Gary Schools*, Vol. 3. J. B. Sears, *The School Survey*, 1925, pp. 106-107.

N. L. Englehardt and F. Englehardt, *Public-School Business Administration*, 759-794.

A. B. Mochlmann, *Public School Finance*, 1927, pp. 66-86.

W. G. Reeder, *The Business Administration of A School System*, 1929, p. 115.

"too high" or "too low" costs and over good and bad units for translating school costs would probably end if proponents of given universal units like "per pupil in average daily attendance" or "per pupil-clock-hour" would think most about the specific purpose for which any given analysis of cost is to be made.

Daily Attendance vs. Pupil Clock Hours

Some of the difficulties which face the school administrator who wishes to translate into comparable unit-costs the expenditures made in his school system and in that of his neighbor, can be shown by a short analysis of two of the most commonly used denominators or units, the pupil in average daily attendance, and the per pupil-clock-hour. The advantages urged for the first unit are: (1) It directs attention to the pupil who is the objective of all school efforts and who is the one basic and constant unit in school activity. (2) It places emphasis upon the pupil in attendance, to whom the educational process is actually being applied and by whom the service rendered by the school machinery is actually received. (3) It is the most uniformly defined element of the school population. (4) It is the most representative measure of the educational load each day of the school year. (5) It is a unit about equally easy to determine for elementary schools, secondary schools, part-time schools, and special classes, and it provides, therefore, a common denominator for comparing these various types of schools.

On the other hand, the average-daily-attendance unit does not serve well when comparisons are to be made between schools and school systems in which the lengths of attendance terms are different. It does not give adequate consideration to the actual time during which pupils are in contact with the educational process. And in any case, membership is only a rough estimate of costs, since it is not directly related to those factors which for many items really cause the expenditures to be large or small as in the case of costs of maintenance or supervision.

In attempts to give due importance both to the pupil for whom costs primarily are incurred and to the time element which also causes increases or decreases in expenditures, the student-hour or student-clock-hour unit has been used. This divisor is based upon the actual instruction rendered and it considers both duration of the process and the number to whom the process is applied. This unit is easy to define and to compute and can be divided for purposes of comparison. However, it cannot be used to measure costs in those functions and those objects which are not very directly affected by attendance such as cost of lighting or plumbing.

This short analysis illustrates how two common units meet some purposes very well, but will fail to be equally helpful in other situations.

Make Units Specifically Useful

Such facts as these need constantly to be remembered when any cost study is projected or is being used for purposes of diagnosis or comparison. Cost studies are made primarily to afford a fact basis for the improvement of existing practices. Such studies can be most useful if the purposes are specific. When the purposes are specific the units used as divisors are likewise specific, and are used each to supplement the other's special ability to tell useful facts.

Some lists of specific units adapted to specific purposes have been published by Englehardt and Englehardt³ and by Reeder.⁴ These units will prove themselves useful as they are sub-

(Concluded on Page 134)

³Op. cit. p. 789.

⁴Op. cit. p. 116.

A High-School-Activities Finance Plan

W. A. Moran, Commercial Department, Antigo, Wisconsin

The Antigo, Wis., High-School-Activities Fund has been in operation a little over four years. It was started in December, 1925, in a rather small way, and is still in the experimental stage; nevertheless, its deposits to date have been over \$36,000 and its disbursements some \$2,500 less than that. The number of activities, organizations, and funds cared for through the activities fund has increased each year, until at present there are 25 depositor accounts, comprising all of the regular extracurricular activities of the school, as well as a few whose connection is more remote. We have aimed chiefly to substitute central banking and unified accounting for scattered accounts and records, but it was apparent from the inception of the plan that it would also operate to supervise collections and expenditures more closely.

A Description of the Antigo Plan

Organizations in other schools are common enough to render the barest outline of our system sufficient for present purposes. Each organization, or activity, of our school deposits all of its funds, practically, with the "head banker," as the teacher in charge of the activities fund is called. These funds are kept for the sole use of the activity depositing them, the only consolidation of funds being at the local bank handling the activities fund account. The head banker writes all the checks, upon the written orders of the advisers of the several activities. The principal of the high school approves all the orders before checks are issued. It is the responsibility of the head banker to see that each faculty adviser keeps or provides more or less adequate accounts of his own organization.

The expression "more or less adequate" is used advisedly. In the first place, we are not yet certain just what data it would be worth while to collect, nor how much of it could be handled well, provided we could get it. Our nonteaching time is not unlimited. In the second place, student officers and faculty advisers are often very weak in keeping records accurately and in assembling their material in proper shape. Often, in addition to knowing little about bookkeeping and bookkeeping terms, they are impatient with the necessity of keeping books, and are hard to teach. We have sometimes been happy when the records of an activity contained enough information to identify each receipt and payment, without expecting more. It would seem reasonable to assume that the individual records of each activity would be more complete than those kept by the head banker for that activity, but such is not always the case. One of the obstacles in the way of improvement is that teachers and advisers are continually changing from year to year. So far we have had the same head banker and the same policy governing the plan in the principal's office throughout the four years, so that the handicap of changing personnel has not affected the fundamental plan. We have been able to get firmly on our feet, experimenting with accounting and report forms, and otherwise adapting our system to the people and circumstances, without any setbacks.

Keeping the Records

Records can, of course, be scrupulously kept and still not escape the oblivion of vaults and filing cases. To be worth while, they should be made available to those whom they concern, and should be in such form as to lend themselves to study and analysis if necessary. Records of individual activities may be filed only for reference as occasion demands, but summaries of the financial dealings of the whole group of activities should be prepared for the benefit of the public or at least those responsible for the school system. The head banker of our

activities fund is not asked to make statements, but has felt it his duty to do so without being asked, and has made them at varying intervals.

Preparation of the Annual Statement

The annual statement is not only a report of the condition of the fund, but it is also a summary of the receipts and expenditures of each activity by six-week periods for the whole year, together with such explanatory matter and incidental information as the experience of the banker dictates. Brief comments and pointed references to certain items in a report lend both intelligibility and interest to a formidable array of figures, besides quieting any tendency to doubt the reliability of the report, or to read into the figures unwarranted conclusions.

Preparation of Comparative Analysis of Finances

For purposes of comparative analysis of ex-

tracurricular finances in the future, which is not the least of the advantages of a central banking system, both the comments and the summary by periods are of great value. As yet our system is too young to yield much reliable comparative data; perhaps conditions will change or vary so much that some desirable comparisons can never be made; but even now we have useful statistics which formerly could only be estimated, and as time goes on their usefulness should increase. We can now judge, for example, how nearly adequate are the funds of a given class to carry it through to graduation, and how much pressure should be put on laggard classes. Class-fund balances are sometimes useful things to have around when there are no strings tied to them; but frequently, and especially when there is no reliable basis for estimating needs, they are built up through considerable needless sacrifice on the part of students and parents, to serve no useful purpose in the end. Funds for emergencies can be acquired in various other ways, and a common excuse for class extravagance — a large balance — may well be eliminated.

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Speeding Up School-Building Projects

"The school board now has a definite part to play in a national program for the stabilization of industry and employment" says the National Education Association in a recent announcement. "Building now is not only for the sake of the children but for the sake of the workers of the nation."

There is unquestionably much merit in the appeal which is here set forth. There are many sections in the United States where an acute schoolhouse shortage exists, and where new buildings are badly needed. Again, there are many old structures which ought to be replaced by modern school buildings.

A schoolhouse project, however, cannot be planned in a day, nor are the necessary financial means always at ready command. The process which must be engaged in securing a new structure is necessarily slow and laborious. A school system may be well provided with means for current expenses, and yet find itself unable to engage in building projects without securing public consent through bond issues or through added tax burdens. Such consent is not readily given unless the need for new school housing is convincingly demonstrated, and then only when tax ability of the community permits the expenditure.

The claim that with the proper impetus the new school-building projects may easily run up to the \$600,000,000 mark is quite optimistic. It is safer to hold that the projects which came near the \$400,000,000 mark in 1929 may run over that figure in 1930. It is also within lines of reason to estimate that the sum of \$100,000,000 will be expended during the present year for schoolhouse repairs. The unprecedented total of \$500,000,000 is in sight.

The conclusion must be that schoolhouse construction cannot, in times of depression, be stimulated to any considerable degree. While on the one hand, labor and material may be obtained at a lower figure it may on the other be found that a community may not favor added tax burdens in times of depression.

There are many school-building projects in contemplation which may be speeded somewhat from the planning to the construction stage. But, it remains that the tremendous volume of schoolhouse construction now in process had its inception last year and the year before, and is realized in response to the needs of a growing school population rather than to any special appeal which has been set forth. The school administrators are actuated in the main by the pressing needs for school accommodations rather than by the fluctuations of the economic conditions. The orderly process of schoolhouse planning and construction cannot in the nature of things be speeded up to any material degree.

Those who are concerned in the welfare of the school child, and are at the same time concerned in prosperity of the worker, will find much satisfaction in the prospect that the year 1930 will see the building of more new schoolhouses than has been seen in any previous year in the history of the nation. It promises to become a banner year in schoolhouse construction.

School Depository and School Treasurer

W. Ray Smith, Superintendent of Schools, Ellwood City, Pennsylvania

The question as to the feasibility of the school depository acting as the school treasurer has come into consideration in western Pennsylvania. The conclusions which are submitted in this article are based upon a questionnaire which embodies the following queries:

Is the office of school treasurer as it now exists necessary?

Is the depository of your district the school treasury?

Do you favor making the school depository the treasury?

The third-class school districts in Pennsylvania have their full share of financial difficulties and at the same time handle sufficient money to warrant a study of their financial problems which are both interesting and important.

The financial reports are made by the school treasurer. Information based upon 32 school districts reveals the fact that while 12 pay no salaries to treasurers, the rest do. Two treasurers receive \$300; two, \$400; one, \$420; two, \$600; and one, \$1,200. The service rendered by the average school treasurer is not satisfactory. It is, therefore, believed to be more practical to use the equipment and experience of the personnel of the bank chosen as the school depository.

Therefore, 24 districts believe that the office

of school treasurer is not necessary. In 12 districts the school treasury has been transferred to the depository, while 23 out of 32 favor such a change.

Sufficient information was collected to support the belief that the logical agency to be intrusted with the responsibilities of accounting for all school money is the well-equipped bank which serves as the school depository. Practically speaking this is the same principal that is operative when a bank or trust company is designated the executor of an estate.

Until a law requiring banks to serve in this capacity is made, the circumstances warrant the further recommendation that each district investigate the practicability of this plan. The writer whole-heartedly advises the employment of the bank which is the school depository as the treasurer for the following reasons:

1. Some economy is possible, and although this did not prove to be the main consideration, it is true that the people of any community appreciate the show of economy in public affairs. The attitude of the people toward the whole educational system is noticeably affected by such considerations.

2. Of even greater weight is the need of available, businesslike reports, such as only a man trained for the work can produce when he has the accounting facilities of a bank at hand.

strative way. Efficiency counts for little. Noise is what is wanted.

There are many things in the field of school administration which can be adjusted without much deliberation. Member Brown may have met Member Jones for a few minutes' chat at the bank, in an office, or at the board rooms. The question in hand may not require a long-winded discussion. A few obvious facts may have made the course of action quite simple and clear. An efficient board of education usually reaches its conclusions with a minimum of friction. It proceeds in a calm, unostentatious manner, and decisive and judicious in action.

SOMETHING ABOUT THE ALL-YEAR SCHOOL

What benefit is possible in the all-year school that is not possible in the present combination of the traditional school system and the elastic summer system?

This is the question asked by the Teachers' Council of New York City and made the basis of a report by that body. In that report the following questions and answers are submitted:

"Is it to make a full use of the school buildings? New York is now using many school buildings during the summer and, if the needs require, may use more.

"Is it to prevent retardation? New York's present system of opportunity classes in elementary vacation schools insists that non-promoted pupils constitute the basic group.

"Is it to gain advanced standing? New York's present system provides for advanced standing of certain groups of children. Whenever advisable, the number of groups can be enlarged. The scheme of some enthusiasts of the all-year plan to *rush* children through their academic work does not seem advisable. Children who are thus rushed into high school are too immature to live a normal social life with their classmates. Those who are rushed into industry increase the continuation-school problem. Why rush children to the point of productivity? In New York City the nature and number of legitimate occupations available to children with an employment certificate are limited by law.

"Is it to secure the 'continuation of regular school habits already in force?' This is possible under the facilities of New York's present system.

"Is it to assist the 'continuous process of growth and development?' New York's present system by its elasticity offers opportunity to accomplish this result.

"Is it to prevent educational waste 'during . . . months of idleness and inactivity?' New York has made provision for this. The following sentence is taken from the superintendent's circular on vacation playgrounds: 'During the summer our vacation playground guards the school and children against (1) the loss of discipline, (2) the tendency toward idleness, (3) the dissipation of mental control and concentration, (4) mortality due to heat, sickness, and street accidents, (5) the loss of physical efficiency.'

"After diligent search in every quarter for the arguments pro and con, your committee, on behalf of the Teachers' Council, recommends that the present system in New York City be continued as the system best meeting the needs of this leading city. It is not necessary or advisable to organize either the whole system or even a group of schools on the all-year plan. The school population can be well cared for by the present ten-month school, supplemented by the flexible vacation schools and vacation playgrounds. Flexibility is an important feature of these summer activities. As conditions change, new needs of the children can be met. Summer programs taking into consideration climatic conditions, industrial conditions, housing conditions, health,

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DR. PHILLIP J. McLAUGHLIN,
President, Board of Education,
Bridgeport, Connecticut

Mr. McLaughlin is devoted to the cause of popular education in that he not only concerns himself with immediate problems of administration but also manifests an interest in the progress and trend of educational endeavor. He attended the Atlantic City convention of the Department of Superintendence and became the breakfast host to a large number of educators.

The School Plant: The Cost of Maintenance¹

Thomas W. Gosling, Superintendent of Schools, Akron, Ohio

The cost of maintaining the school plant is incurred for the purpose of retarding the speed of depreciation. In school accounting systems the cost of maintenance includes items relating to buildings, grounds, and equipment. Obviously, the rate of depreciation differs greatly in these several items. Since the heaviest capital investments of board of education are in school buildings, the prolongation of the period of usefulness of these buildings is of great importance.

Contrast Between Business and Education

It may become possible in the distant future for boards of education in the transaction of public business to follow the principles which are applied by private business and industry. It is not possible to make this application at the present time. Business and industry discard equipment and tear down buildings when their period of economic usefulness has passed. Under the compulsion of public opinion, boards of education are required to keep in use antiquated equipment and buildings that are ill suited to the requirements of modern education. Structurally, many buildings are sound for a long period beyond the time when they should be used by school children. In business, economic waste is soon reflected in the balance sheet. There is no such easy way by which the waste in the education of children can be detected and measured. For this reason, the public frequently is able to protect its pocketbook at the expense of its children.

The Life Expectancy of School Buildings

According to the best information now available, the maximum period of usefulness of a school building is fifty years. This estimate is based upon the life history of a considerable number of buildings to which varying policies of maintenance had been applied. Without maintenance of some kind or other, the life period of each of these buildings would have been shortened materially. It is possible through a farsighted policy of maintenance to prolong the life of buildings long after they have become obsolete for purely educational purposes. This fact raises two rather important questions for which no immediate answers are available. In the first place, if the buildings which we are constructing today are likely to become obsolete long before they are structurally unsafe, would it be wise to construct buildings with a life expectancy below the present expectancy of fifty years? If this procedure could be followed safely, there would be large savings in building costs. Wise administration will support any method of economy that does not mean hardship and loss to the children.

In the next place, there is the question of the extent to which maintenance should be applied. Shall we try by maintenance policies to keep our buildings serviceable as long as possible, or shall we adopt maintenance policies which will keep the buildings serviceable for a shorter period than their life expectancy? In other words, there is need for determining the correlation between maintenance costs and the social and economic utility of school buildings. No such correlation has yet been established.

Variations in School Accounting

In the approved method of school accounting, expenditures which add to the value of buildings are not properly classified as maintenance costs. They should be classified rather as *Capital Outlay*. Since methods of cost accounting have not been standardized, it is doubtful whether in all instances capital outlay from

revenue has been segregated from maintenance costs. Until this segregation is assured, comparisons of costs of maintenance in various cities are of somewhat doubtful value. If, for example, when in one school system the old fixed desks in classrooms are supplanted by new movable desks, the cost of making the change is classified as a maintenance cost exclusively, whereas in another system half of the cost is charged to maintenance and the other half to capital outlay from revenue, the comparative figures become almost meaningless. In periods of financial stringency, the first items of school expenditures to suffer reduction are the items of maintenance. There is a general tendency to spare personnel as much as possible, and to effect economies elsewhere. Doubtless this tendency is a wise expression of policy, because the losses inflicted upon children through any impairment of the personnel of the teaching staff cannot easily be restored, whereas depreciation in material equipment in buildings may be compensated for later on, even though the cost at a later date may be greater.

Trends in Maintenance Costs

A sound financial policy for the administration of schools would lay out over a long period of years a program which would make an equitable distribution of school expenditures under all items of the budget. Just what this equitable distribution would be, cannot be stated positively at this time, because the conditions in different localities are far from being identical. For example, in the warmer sections of the country, the expenditure for heating and ventilation is much lower than is required in the colder regions. Consequently, a larger percentage of the school revenues is available for instruction or for maintenance. Some cities are so heavily handicapped by bonded indebtedness that they are under the painful necessity of exercising rigid economy everywhere. Inequalities of all kinds militate against standardization of budgetary appropriations. Nevertheless, certain trends in the distribution of school expenditures among the several budgetary items may be helpful, even under the present unstandardized systems of accounting. The following figures showing the percentage distribution of the various items of maintenance of the school plant for 27 cities over 100,000 in population were obtained for the school year 1925-1926 through the courtesy of the statistical division of the United States Office of Education and from the research division of the National Education Association. These figures for 1925-26 are the latest available figures which show a segregation of the several items of maintenance:

City	Percentage Distribution of Various Items				
	Buildings and Grounds	Engineering and Janitor Equipment	Educational Equipment	Other Expenses	Total
1	2	3	4	5	
San Francisco, Calif.	97.45	.03	2.50	.02	100.00
Denver, Colo.	71.58	2.62	25.15	.65	100.00
Bridgeport, Conn.	53.68	32.42	11.21	2.69	100.00
Atlanta, Ga.	97.15	.38	2.46	.01	100.00
New Orleans, La.	81.45	3.23	1.17	14.15	100.00
Baltimore, Md.	70.09	2.82	15.62	11.47	100.00
Boston, Mass.	77.62	2.30	14.77	5.31	100.00
Detroit, Mich.	79.51	1.71	17.29	1.49	100.00
Grand Rapids, Mich.	76.95	2.42	18.76	1.87	100.00
St. Paul, Minn.	43.95	34.53	8.86	12.66	100.00
St. Louis, Mo.	60.31	7.90	9.72	22.07	100.00
Camden, N. J.	5.27	55.21	26.43	13.09	100.00
Jersey City, N. J.	97.19	1.56	.89	.36	100.00
Newark, N. J.	82.39	4.04	12.93	.64	100.00
Paterson, N. J.	80.08	3.69	16.19	.04	100.00
Trenton, N. J.	69.84	1.27	28.88	.01	100.00
Albany, N. Y.	17.50	53.87	25.90	2.73	100.00
New York, N. Y.	37.52	36.71	14.90	10.87	100.00
Akron, Ohio	47.14	43.28	8.03	1.55	100.00
Cincinnati, Ohio	86.97	.56	5.58	6.89	100.00
Columbus, Ohio	68.98	27.05	3.49	.48	100.00
Toledo, Ohio	62.62	26.27	6.52	4.59	100.00
Youngstown, Ohio	48.93	39.05	8.91	3.11	100.00
Reading, Pa.	37.45	26.56	17.32	18.67	100.00

Dallas, Texas..... 86.50 9.67 1.74 2.09 100.00
Houston, Texas..... 80.36 16.58 3.01 .05 100.00
San Antonio, Texas 75.53 1.14 22.18 1.15 100.00

An examination of the foregoing tabulation shows clearly either that the systems of accounting in the several cities are very dissimilar, or that the maintenance policies are very different. For example, San Francisco, Atlanta, Jersey City, Cincinnati, and San Antonio, show high percentages of maintenance devoted to buildings and grounds, and low percentages devoted to engineer and janitor equipment. Quite by contrast with these cities, Bridgeport, St. Paul, Camden, Albany, New York City, Akron, and Youngstown show high percentages devoted to engineer and janitor equipment. Doubtless an adequate explanation of these variations can be given in all cases. The figures standing by themselves merely serve to raise questions which would take further research to answer.

According to *Statistical Circular No. 12*, of the Office of Education, for January, 1929, the figures for the school year 1927-28 show that "the portion of the total cost spent for maintenance varies from 3.5 per cent in the smaller cities to 5.4 per cent in the larger cities, and the average amount varies from \$2.83 in the smaller cities to \$6.16 in the larger cities." The latter figures are per-capita costs for pupils in average daily attendance. Here again several interesting questions are raised.

Are the maintenance costs in the larger cities due to higher prices for labor and materials, or to extravagant administration, or to more adequate attention to school needs? Further research will be necessary before answers can be given to this inquiry.

The latest available figures on city school expenditures are shown for the school year 1928-29 in Circular No. 1, January, 1930, prepared by the Educational Research Service of the National Education Association. According to this report, the cost for maintenance per pupil in average daily attendance in full-time day schools is as follows:

Cities over 500,000	\$5.63
Cities 100,000 to 500,000	\$5.35
Cities 30,000 to 100,000	\$4.24
Cities less than 30,000	\$4.14

(a special limited group)

In these same groups, the percentage of current expenses devoted to maintenance is as follows:

Cities over 500,000	4.46
Cities 100,000 to 500,000	5.06
Cities 30,000 to 100,000	4.17
Cities less than 30,000	4.01

(a special limited group)

In 10 cities over 500,000 in population, the maintenance cost per pupil in average daily attendance in full-time day schools is given below.

Los Angeles, Calif.	\$3.80
San Francisco, Calif.	\$8.80
Chicago, Ill.	\$8.19
Baltimore, Md.	\$5.21
Detroit, Mich.	\$3.60
St. Louis, Mo.	\$9.61
New York, N. Y.	\$4.65
Cleveland, Ohio	\$8.46
Philadelphia, Pa.	\$4.24
Pittsburgh, Pa.	\$6.38

In these 10 cities the cost for maintenance per pupil varies from \$3.60 in Detroit to \$9.61 in St. Louis.

In these same cities the percentage of maintenance costs to total current expenses shows the following facts:

Los Angeles, Calif.	2.86
San Francisco, Calif.	6.79
Chicago, Ill.	6.79
Baltimore, Md.	5.75
Detroit, Mich.	3.48

(Concluded on Page 132)

¹An address given before Group VII of the Department of Superintendence, at Atlantic City, N. J., February 25, 1930.

School-Business Administration—Architectural Design, Plans, and Specifications

Geo. F. Womrath, Minneapolis

12. What Shall Be the Length of a Classroom?

To determine the shortest length permissible for a classroom, the superintendent should require the architect to make scale layouts of the various rooms, showing the location of all desks and equipment, and the width of aisles. Experiments should be made whenever possible, within existing buildings to determine the most practical sizes of rooms. If this is done, the length of rooms required to provide the most suitable and convenient working space for teachers and pupils will readily be determined. Care should be taken not to lengthen the rooms unduly, as every extra foot of classroom length, beyond the actual requirement, will incur a building cost of \$3,024, based upon a cubical content figured as follows, and using the same theoretical building as is indicated under Item 9:

3 classrooms (assumed length of building)
1 ft. reduction in length of each classroom
3 ft. reduction in length of building
30 ft. approximate height of building
56 ft. width of each wing
30c per cubic foot assumed cost of construction
$3 \times (56)2 \times 30 \times 30$ equals \$3,024.

If in a given building, as covered by Items 9, 10, 11 and 12, the superintendent were to make a reduction of but 1 ft. in the width of classrooms, and 1 ft. in the height of ceilings, and 1 ft. in the width of corridors, and 1 ft. in the length of classrooms, the approximate saving in the cost of the building would be \$22,416, as follows:

Item 9. Reducing width of classrooms 1 ft.....	\$ 5,760
Item 10. Reducing height of ceiling 1 ft.....	10,752
Item 11. Reducing width of corridor 1 ft.....	2,880
Item 12. Reducing length of classroom 1 ft.....	3,024
\$22,416	

If this amount, or its approximation, is actually saved in the construction of a building, it accomplishes what was said by Mr. Weeks, as quoted at the beginning of this problem, namely, "that the building be made smaller, without reducing the pupil capacity or omitting any of the educational requirements."

13. How Should the Superintendent Proceed to Visualize Floor Plans and to Establish the Relationship Between Room Dimensions and Structural Cost?

As the dimensions of every room, its length, width, and shape, bears a definite relationship to the educational functions to be conducted in it, the superintendent should be the one to make the final decision as to what these measurements shall be, always keeping in mind any state requirements as to minimum-pupil-floor space and cubic volume.

The superintendent may properly require room layouts to be made by the architect, show-

ing the location of furniture and equipment, and circulation spaces. This should be required whether the architect's contract includes a fee for equipment or not, as the superintendent cannot properly visualize room areas without these layouts.

Coupled with these layouts the architect should be required to give estimates of cost of different room widths and sizes, involving different spans and structural features. For, in addition to the savings as previously computed, for widths of classrooms and corridors and height of ceiling, it may also develop that a foot, or even a few inches, more or less in the dimensions of a room may change the size of the beams, or the amount of reinforcing required, or the thickness of the walls to such an extent as to increase or decrease the cost tremendously. With these facts before him, the superintendent can decide just how far changes in educational layouts can be made in order to meet different structural schemes. This is but one of the reasons why the superintendent should keep in close contact with the architect, while the plans are being prepared, and why the architect should furnish room layouts for the superintendent's information and approval before incorporating them in the plans.

It is always better to eliminate columns under the auditorium and gymnasium balconies at an increased cost of construction of several thousands of dollars, than to spend an equivalent, or greater amount, for columns at entrances or upon elaborate exterior ornamentation.

"There are two principles upon which building policy should rest. First: Rooms should be built for use. No matter how loudly demanded they may be, rooms which are not going to be used should not be built. The school superintendent (the word in the original text is architect) in making each new plan should ask himself, Is this a good way to utilize this space? What definite purpose will it serve? Is there any better use to which it can be put?

"The second principle is that children should not be expected to fit the plan of the building, but buildings should be planned to fit

the needs of the children. Just as in teaching, supervision, administration, business policy, and other phases of the school system, so also the school plant must be plastic in character, changing and developing for one single purpose, to provide the best possible environment for the children whom it serves. For, through all the complexity of modern education, the fact remains that schools and school systems exist for the sake of the children, and whatever educators do, it must be for the ultimate purpose of meeting more fully the children's needs."

The following floor-plan layout for a classroom will indicate the extent to which such a layout may be utilized by the superintendent, in making a study of a classroom with dimensions somewhat different from the commonly accepted standard:

When studying a room layout such as shown, some of the questions which at once present themselves for an answer are:

Is there any objection to an exposed beam ceiling? If so, why?

Are the aisles between the rows of seats wide enough?

Are aisles next to windows and on corridor side of room wide enough?

Is the blackboard area sufficient?

Is there enough bulletin board area?

Are blackboards of proper width, and of correct height above the floor?

Is a separate wardrobe desirable?

Is there any objection to a low partition between classroom and wardrobe?

Are individual toilets desirable? For what grades?

Is any wall space, or floor space, not utilized to the best advantage?

Is the classroom furniture sufficient? Can it be reduced to advantage?

Is a large amount of book and supplies storage space at the back of the room more desirable than a blackboard would be in this same space?

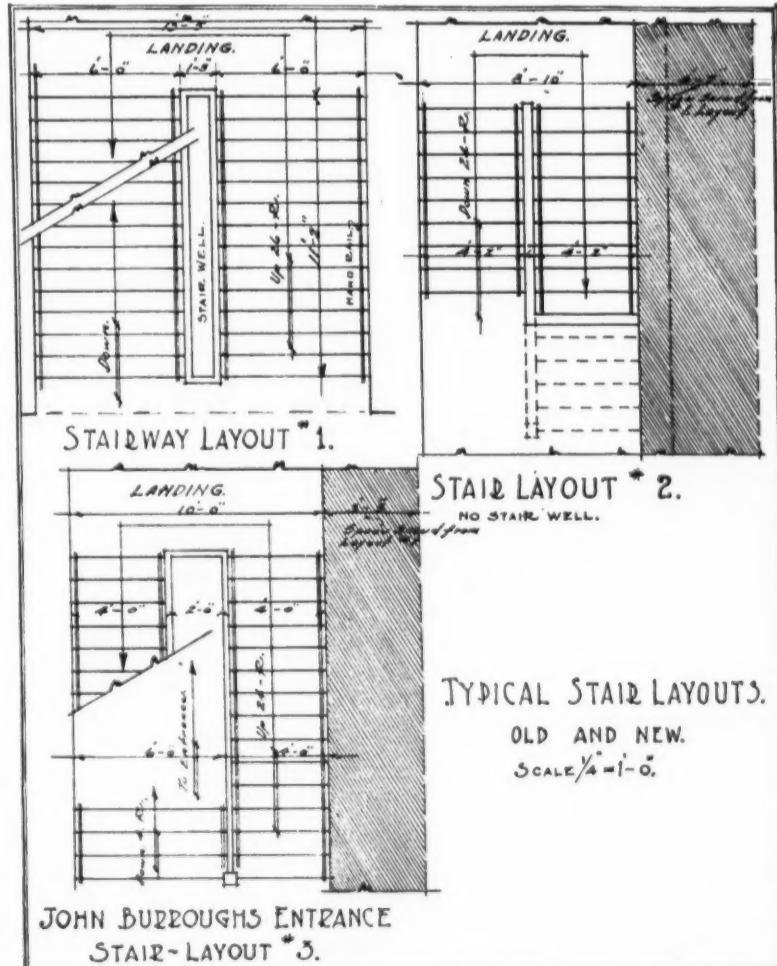
Are unit ventilating outfitts objectionable?

Is a room 21 ft. wide too narrow for an elementary-school classroom?

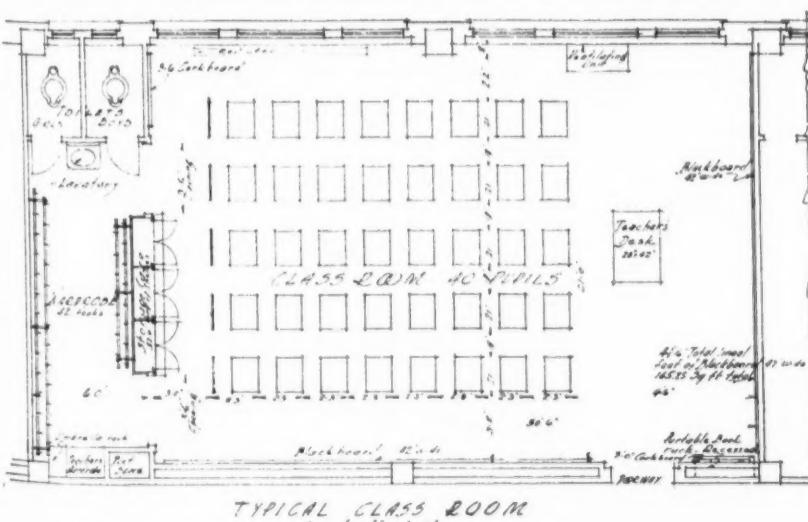
Is a room 30 ft. 6 in. long too short for an elementary-school classroom?

Lockers on the rear wall and on the corridor-wall side of a classroom cut down the blackboard area and width of aisles. Is this objectionable?

(Continued on Page 132)



ABOVE ILLUSTRATIONS SHOW HOW STAIRWAY CONSTRUCTION AFFECTS ECONOMIES IN BUILDING DESIGN AND CONSTRUCTION



FLOOR PLAN OF TYPICAL CLASSROOM OF ELEMENTARY SCHOOL FOR STUDY AS TO DIMENSIONS AND EQUIPMENT

THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

WM. C. BRUCE

School Publicity—Beneficial and Harmful

THE taxpaying public is concerned in the maintenance of the public schools, and hence, exacts the right to be informed as to their operation, cost, and service. The modern school executive not only recognizes that right, but appreciates the value of favorable publicity. He knows that every new project, departure, or innovation, calling for additional tax tributes, must be submitted to the public in an open, frank, and convincing manner in order to receive approval.

While certain publicity is beneficial, and even necessary, there is also manifest the kind of publicity that is unwise, sometimes premature, and often harmful. The circumspect and cautious school administrator realizes this aspect of the school publicity problem. Books and pamphlets on publicity procedure are abundantly issued, and ingeniously and ably devised. They tell us what is to be done, but the "don'ts" have not in every instance been made clear.

We need not reiterate that the consideration of prospective school sites, as well as the question of morals affecting teachers and pupils, must be adjusted behind closed doors. Publicity in the one instance may be premature, hence harmful, while in the other the disciplinary morale of an entire school constituency may be at stake.

The unwise publicity which finds its way into the public press is usually due to overheated debate in board-of-education deliberation, friction between the professional factors, or a rupture between parent and teacher. The tendency here is to press individual opinions and desires to a point where the larger aspects of the case are ignored.

There are those who resort to the dramatic, and spectacular when the unostentatious and subdued will serve a better purpose. In the realm of human adjustments more things are settled by a patient, private conference than an acrimonious public debate. A comment, a suggestion, or a word of caution, spoken in a friendly, coöperative spirit and at the proper time and place, may obviate angry outbursts and explosions.

One of the chief offenders is the new member on the board of education, who has conceived the notion that things are terribly wrong, and that radical reforms are in order. He glories in the publicity which he is certain to get. Incidentally, he may do more harm than good. Misunderstandings between superintendent, principal, and teacher sometimes lead to open rupture. The unreasonable parent is always a menace to the orderly conduct of a school system.

The publicity side of a school system deserves at all times the attention of those identified with the same. Its operations are a matter of public concern. At the same time, all premature, unwarranted, and harmful publicity must be avoided. The prestige and dignity of the school system must be upheld, if public confidence is to be retained.

Educational and Business Phases of School Administration

IN the field of school administration the educational business set up is subject to various types or organization. Among these, two types are outstanding and have come into frequent discussion in recent years. The one places the direction of the educational and the business labors into the hands of one person, while the other separates the business from the educational, and clothes two persons with coördinate authority. In the former the superintendent controls, in the latter the superintendent and the business manager are independent of each other.

Discussion on the subject is by no means new, and the developments of recent years do not warrant the inference that there is a definite trend from the coördinate to the centralized type of organization. Those committed to one or the other type defend their position with plausible arguments and conclusions.

It is agreed that the business side must be so adjusted as to serve the educational objectives of the school system. And it is not unreasonable to assume, since the business labors are an indispensable prerequisite to the educational, that both should be placed under one directive head. Thus, the superintendent of schools, who is held responsible for the successful operation of the schools, presumably becomes the logical head of both the educational and business service.

In theory, this unified form of control is unquestionably sound; in practice, however, it is open to discussion. If the superintendent of schools, who is a professional man, were also a keen business executive, the answer would be quite simple. The two do not, as a rule, go together. Frequently the educational expert, who knows how to lead and inspire the professional factors, may know little about the intricate problems that attach to the business side of a large school system. And it is because of this fact, that, where the financial operations of a school system have assumed a certain volume, the business manager is on the scene.

The question which arises at this point is whether such business manager shall be under the immediate direction of the superintendent of schools, or whether he is regarded as a coördinate officer and expert, who is responsible to no one except the board of education. Experience has taught that where the educational expert and the business expert coöperate with a proper appreciation of the function of each, it can make but little difference whether the one reports to the other, or whether both report simultaneously to the board of education.

In either event much depends upon the superintendent of schools. If he is a strong executive, he will not only recognize the business manager in his capacity as a specialist, but will, under either type of organization, secure the desired result.

Prof. Harry P. Smith, of the Syracuse University, recently said: "The weak spot in the business administration of city schools is the assumption that the educational administration and the business administration are two entirely separate and distinct functions, each to be performed by an executive responsible directly to the board. It is supposed, of course, that there will be coöperation between the educational executive and the business executive. Many times this assumption is well founded. Too frequently, however, there is a woeful lack of coöperation due to the many factors, human and otherwise, operating in such situations."

The criticism here advanced is, no doubt, well founded, but it does not necessarily argue that one or the other type of organization must be observed in order to attain complete success. It argues for coöperation. The business expert who is under the control of an unwise superintendent may be less efficient than the one who is not under such control, and who is directly answerable to the board. On the other hand, a school business manager who underestimates the educational objectives, or fails to recognize the function of the school superintendent, does not meet the full purpose of his office.

If the theory of unified control, which is not seriously attacked, has not met with greater success in practice, it is because the superintendent has not always inspired confidence in his own ability as a business executive. A board of education whose membership usually includes some hard-headed merchants and manufacturers must be convinced that the superintendent is fully versed in the intricacies and economies involved in the management of business affairs.

The all-around, efficient school superintendent, however, is not seriously concerned over the subject. He not only cultivates that coöperation which is necessary to the successful operation of the school system regardless of the type of organization that obtains, but he also has a reasonable assurance that he gets what he demands.

The Radio as a Factor in Popular Education

IT is becoming increasingly evident that the radio is gradually finding its way into the schools, and will eventually hold a fixed place in the general scheme of popular education. At any rate, the advent of the radio in the classroom is announced. Educators are discussing here and there just how the innovation can render a maximum service, or rather what radio service would serve the cause of popular education best.

Its acceptance as a factor in home life is established. It entertains as well as instructs. Social circles, however, invite entertainment rather than instruction. The schools, on the other hand, would demand more

instruction and less entertainment. Finally, they will demand a clearer understanding as to just what that instruction shall be.

Discussions, bringing out both favorable and unfavorable opinions, have been engaged in. The objectors hold that the radio is an expensive and experimental innovation, which tends toward a low form of entertainment. The supporters of the radio uphold its possibilities as a distinctive aid to all branches of schoolroom studies.

In dealing with radio from the standpoint of the school it remains that its proper place, as a part of the curriculum, is yet to be found; or rather that the "air school" is still in the making. But with characteristic American alertness and enterprise, leading educators are concerning themselves with the subject. It is already clear that studies in music, art, social sciences, nature studies, geography, health and hygiene may be broadcasted with profit, alike to a child and an adult constituency.

One of the promising departures, in the direction of an organized and properly defined plan as to subject matter, has been announced. One of the larger broadcasting systems is to be employed in inaugurating the plan under the leadership of Hon. Ray Lyman Wilbur, Secretary of the Interior; John William Cooper, United States commissioner of education; Dr. William C. Bagley, Teachers College, Columbia University; Henry Turner Bailey, Cleveland Museum of Art, etc.

A bibliography of subjects to be presented has been prepared. A faculty of sixteen of the most distinguished American educators has been chosen. It will remain for the several broadcasting stations throughout the country to provide readings that will be suited for classroom instruction. It will be within the individual school to adjust its daily program so as to avail itself of the offerings made.

Finally, it may be said that the advantages which a radio recitation may possess in augmenting the work of teacher and textbook, have not been fully unfolded. Experiment and experience will determine. The opportunity of inviting the voice of the nation's great educators into every classroom at least is in sight. The privilege of hearing the leaders in education, which is now confined to the few, may thus be brought to the service of the many.

At any rate, the part which the radio, as an air school, may play in the country's future scheme of popular education, deserves all the attention which is now given to the same.

School Architecture—Cheapness and Ugliness

THE stranger who meanders through the town for the first time, looking about to secure a measurement of community progress as expressed in architecture, will sooner or later encounter a schoolhouse. He will note that it is either large or small, old or new, modest or imposing. The native will point to the new and stately structure and forget about the old and ugly. The pride of the town dotes on its more attractive architecture. The man who possesses a discriminating eye will not only view with some satisfaction the finer among the modern school buildings, but will also note the striking difference between the old and new. He will observe that the schoolhouse of two or three decades ago is a clumsy and austere structure, while the modern building is graceful and inviting in design.

But, are ugly structures cheaper? Look at some of the old school buildings, with the high roofs, and ugly turrets and towers. These are not cheap. They are expensive. They have been subject to frequent repairs and renovations and a constant worry to school officials. In other words, their ugliness has been maintained through periodic repair bills. Besides, the attic under the roof is a waste of space.

The modern building with its flat-top roof, its simple and graceful façade, its attractive entrances, is more economical in upkeep and maintenance than the old-time, cumbersome structure.

It is scarcely necessary to mention that a school edifice ought to bear an attractive and inviting appearance. The architecture must get away from the prison effect and the factory exterior. The structure must express the purpose for which the same is used. It must at a glance tell that it is a schoolhouse. At the same time, it should express the dignity of education and set a standard in well-rounded architecture.

It must be said for American school architecture that it has achieved many refinements within the past quarter of a century, and that the up-to-date schoolhouse combines both neatness of style and economy in construction. Ugliness spells cheapness, but not economy.

State School Support and Income Taxation

IT has been noted in these columns before, that the leading educators of this country are gradually recognizing the importance of taxation as a prerequisite to an adequate state school support. With increasing interest, too, they are investigating the subject of taxation, and mastering the fundamentals which govern the same.

For many years the editor of the AMERICAN SCHOOL BOARD JOURNAL, being himself a student of taxation, has fostered the thought that the educator who championed a more liberal support, must also familiarize himself with the sources of that support. If in any discussion he is confronted with questions relating to taxation, he cannot well plead ignorance without a loss of prestige to himself.

The legislator looks upon the educator as one who can speak with authority on the needs of the modern school, but also as one who knows how these needs may be met. The educator may hold that it may be his duty to ask for more money, and assume that it is the legislator's job to find that money.

The legislator, on the other hand, may maintain an entirely different approach to the subject. The schoolmaster who comes before him in a plea for better school support is supposedly an intelligent citizen who can suggest as well as advise. If the proposal implies an increased tax revenue, or the discovery of new tax sources, then the legislator in self-defense may challenge the educator to point out just where the added tax tributes are to be found. Can the present taxable property stand any added burdens? Can you discover new tax sources? If you tell us to provide more money for the schools, will you also tell us how, and where to get it?

As already stated, educators are beginning to see that concrete proposals, rather than vague theories, must be advanced. Thus, Charles A. Lee, state superintendent of public instruction of Missouri, in a recent public address, discussed taxation for school purposes, and demonstrated a remarkable grasp of the subject. He was clear in the belief that real estate and tangible personal property were carrying the greater part of the tax burden, and could not consistently carry any more.

But he went further. He pointed out that a man might live in a rented house, have great wealth invested in intangible property, and not pay one cent of school taxes. Here he came to the core of the whole problem of equitable taxation. It led him, as it inevitably must, into the field of income taxation. He was fortified by an expert commission report which had worked out and submitted a graduated income-tax plan. This plan he discussed with intelligence, with vigor, and with the confidence that he was traveling on sound premises.

It is gratifying to note that sound discussions on the subject of taxation are engaged in by the schoolmaster and are being disseminated for public information. No tax reform is possible in any state, unless the constituency is reasonably familiarized with the equities involved, and the schoolmaster may well engage in such discussions as will enlighten the popular mind on the subject of the cause of popular education as eventually to be served.

The Correct Basis for School Rules and Regulations

Copies of the rules and regulations of boards of education were collected from cities of over 30,000 in population by the research service of the National Education Association. An examination of 95 furnished copies prompts the research experts to suggest the following desirable characteristics for a well-organized set of rules and regulations:

- Rules should be guiding principles rather than collections of detailed instructions.
- Lines of authority and other relationships should be clearly set forth.
- Important duties should be definitely allocated.
- The major responsibilities of officials and groups of individuals should be stated.
- Rules should be consistent with existing school laws.
- Rules should be consistent with existing school practice. (A rule that is no longer needed should be repealed, not allowed to become a dead-letter. New rules should be adopted to keep pace with the growing school system.)

A Clerical Survey of a City School System

J. Frederic Ching, Research Assistant, Oakland Public Schools

Part II. Deriving a Schedule of Assignment of Clerical Help for Junior High Schools

The clerical situation in a junior high school differs in several important respects from that in a senior high school. In the first place the type of organization is different. It is designed to cope with younger children, it has a fewer number of courses which the pupil may take, it tends to *mother* its flock with longer periods in the major or home room, and the student activities are less extensive and demanding. These differences have a direct influence on the amount of clerical work centralized in the principal's office. Each type of school brings with it a change in the centralization of pupil control and a resulting change in the centralization of pupil records.

Three problems present themselves in a study of clerical assignments, namely; (1) What duties are now performed by principals, teacher, executives, counselors, teachers, and librarians, which might just as efficiently and more profitably be assigned to a secretary or a clerk? (2) What tasks should be assigned to each of the several classified positions which handle the clerical work of school administration? (3) What is the most efficient method of handling office procedure in connection with (a) the principal's office, (b) the attendance office, and (c) the textbook work.

An analysis of duties of the principal's office has been made and a suggested list of duties which should ordinarily be assigned to each member of the principal's clerical staff is given here.

For administrative purposes the following tasks have been included under the principal's office:

1. Those tasks immediately arising in the office of the principal, such as mimeographing, dictation, statistical reports, and filing;
2. Handling of school funds, and
3. Clerical time available to counselors.

Major Office Duties Which Might Be Assigned to the Principal's Clerk

A. GENERAL OFFICE WORK

1. Type, check, or compile all administrative reports (too numerous to mention in detail).
2. Control of supply distribution.
3. Issue library and room permits.
4. Handle teachers' room keys.
5. Telephone for substitute teachers.
6. Wait on counter, give information and special notices.
7. Prepare forms for reports and assist teachers in making reports.
8. Type budget each semester.
9. Take inventory and order courses of study.
10. Type programs of school affairs and type copy for school paper.
11. Issue half-fare car slips to pupils.
12. Make out permanent record cards for each pupil.
13. Make room reservations for various meetings and report on meetings held.
14. Receipt for incoming library books and supplies.
15. Make office cards for recording grades.
16. Distribute pins to new honor students and collect from students failing to make points.
17. Type list of pupils' introduction cards for counselors.
18. Dictation and filing.

B. ATTENDANCE WORK

1. Make all statistical reports on attendance.
2. Write eliminations and transfers.
3. Register new students.
4. Check enrollment cards, O.K. to send to attendance department.
5. Telephone school for transfer cards of students when necessary.
6. Send credentials to school where students are transferring.
7. Send signature cards to new students and see that they record them.
8. Make up major lists for incoming students.
9. Keep record of all changes in enrollment.

C. HANDLING OF SCHOOL FUNDS AND LOCKER KEYS. (Duties of the clerk as school treasurer)

1. Check on supplies received.
2. Make requisitions and record them.
3. Send out notices of all canceled requisitions.
4. Follow up old requisitions not filled.
5. Issue locker keys to students, hold deposits, and make refunds.
6. Interview students who failed to turn in locker keys.
7. Keep record of cafeteria, locker key, special revolving, property damage, and other school funds.
8. Make monthly statement to auditor on the condition of all school funds.

Duties Which Might Be Assigned to a Student Clerk in the Principal's Office

A. GENERAL OFFICE WORK

1. Mail: distributing and addressing.
2. File stencils, cards, etc.
3. Mimeograph and distribute principal's bulletins and other material.
4. Assist librarian in making catalog cards.
5. Open lockers for those who lost or forgot their keys.
6. Check magazines each month.
7. Alphabetize and file honor-roll slips.
8. Type lists of traffic squads.

B. WORK FOR SCHOOL COUNSELOR

1. Correct educational tests.
2. Tabulate test scores and enter on cards.
3. Get scholarship records for counselor's use.

The major clerical duties mentioned above represent only a selected few of the hundreds of routine tasks found in the junior-high-school principals' offices through job-analysis technique.

Factors Affecting the Clerical Organization

The organization of the junior high schools affects the organization of the clerical staff. In Oakland, Calif., the home-room teacher is chiefly responsible for the attendance of her group. This means that the school-attendance office will function only as an agency for making contacts with the pupils' homes regarding attendance, for passing on the validity of excuses, admitting pupils to classes and excusing them from attendance. It also provides a place for organizing the school's attendance reports.

The junior-high-school survey of Oakland recommended that a vice-principal or teacher executive be allotted a given number of hours per day, in accordance with the schedule presented later in this article, for conducting attendance work and that clerical time be granted for the many routine duties of this office.

The junior high schools in this study are of two types: (a) schools with grades 1 to 9 inclusive, and (b) schools with only grades 7 to 9. A cost analysis of the work of the principal's office in each type of school revealed the fact that while the time taken by the clerk for compiling reports is greater in the combination schools, the time taken for pupil adjustments, programs for school activities, locker keys, and treasury work is greater in the schools with only grades 7, 8, and 9. In addition, there are numerous items which are cared for by the teachers of the lower grades which are handled by the principal's office in the upper grades.

In view of these findings, two staffs were set up, one for the elementary-junior-high-school group (grades 1 to 9), and one for the junior-high-school group (grades 7 to 9). The differences spoken of above have entered into the construction of the clerical assignment schedule.

Handling of School Funds

It was evident in an analysis of the cost of accounting for school funds that the higher costs per pupil were in those schools where members of the certificated staffs handled the

TABLE I. The Schedule of Clerical Assignment in the Principal's Office — Elementary-Junior High Schools (Grades 1-9)

Enrollment Interval	STAFF OF PRINCIPAL'S OFFICE				Cost per Pupil Enrolled*
	Junior High Prin. Clerk	Treasurer (Prin. Clerk)	Elementary Prin. Clerk	Student Clerks (Hrs. per Day)	
501 - 600	5/7	1/7			\$1,286 \$2.34
601 - 700	5/7	1/7			1,286 1.98
701 - 800	5/7	1/7			1,286 1.71
801 - 900	5/7	1/7			1,286 1.51
901 - 1000	6/7	1/7			1,600 1.58
1001 - 1100	6/7	1/7	1	1	1,550 1.48
1101 - 1200	6/7	1/7	3	3	1,710 1.49
1201 - 1300	5/6	1/6	6	6	1,870 1.49
1301 - 1400	5/6	1/6	1/2	1/2	2,030 1.50
1401 - 1500	5/6	1/6	1/2	3	2,190 1.52
1501 - 1600	5/6	1/6	1/2	6	2,340 1.52

TABLE II. The Schedule of Clerical Assignment in the Principal's Office — Junior High Schools (Grades 7-9)

Enrollment Interval	STAFF OF PRINCIPAL'S OFFICE				Cost per Pupil Enrolled*
	Junior High Prin. Clerk	Treasurer (Prin. Clerk)	Student Clerks (Hrs. per Day)	Cost per Pupil Enrolled*	
501 - 600	7/8	1/8			\$1,550 2.82
601 - 700	6/7	1/7	1	1	1,550 2.38
701 - 800	6/7	1/7	1	1	1,550 2.07
801 - 900	5/6	1/6	2	2	1,600 1.88
901 - 1000	5/6	1/6	2	2	1,600 1.68
1001 - 1100	4/5	1/5	5	5	1,750 1.67
1101 - 1200	1 3/10	1/5	2	2	2,350 2.04
1201 - 1300	1 1/4	1/4	2	2	2,350 1.88
1301 - 1400	1 1/4	1/4	5	5	2,450 1.81
1401 - 1500	1 3/4	1/4	1	1	3,050 2.10
1501 - 1600	1 3/4	1/4	1	1	3,050 1.97

*Based upon the mid-point value of the enrollment interval.

funds. Aside from the cost there are other difficulties involved in assigning such work to teachers. The time available for such work is governed by the length of the school periods and the possibility of working out the school program to meet the requirements of time. This means that while the time necessary to handle the school funds may be a fraction of a period or possibly exceed a period, the time taken from instructional work is the entire period or two periods. This is a loophole for waste in which it is administratively impossible to adjust. Again, treasury duties do not involve a regular amount of work each day. On some days there is little to do, while on others, the work cannot be done in the allotted time. This makes it

(Continued on Page 74)

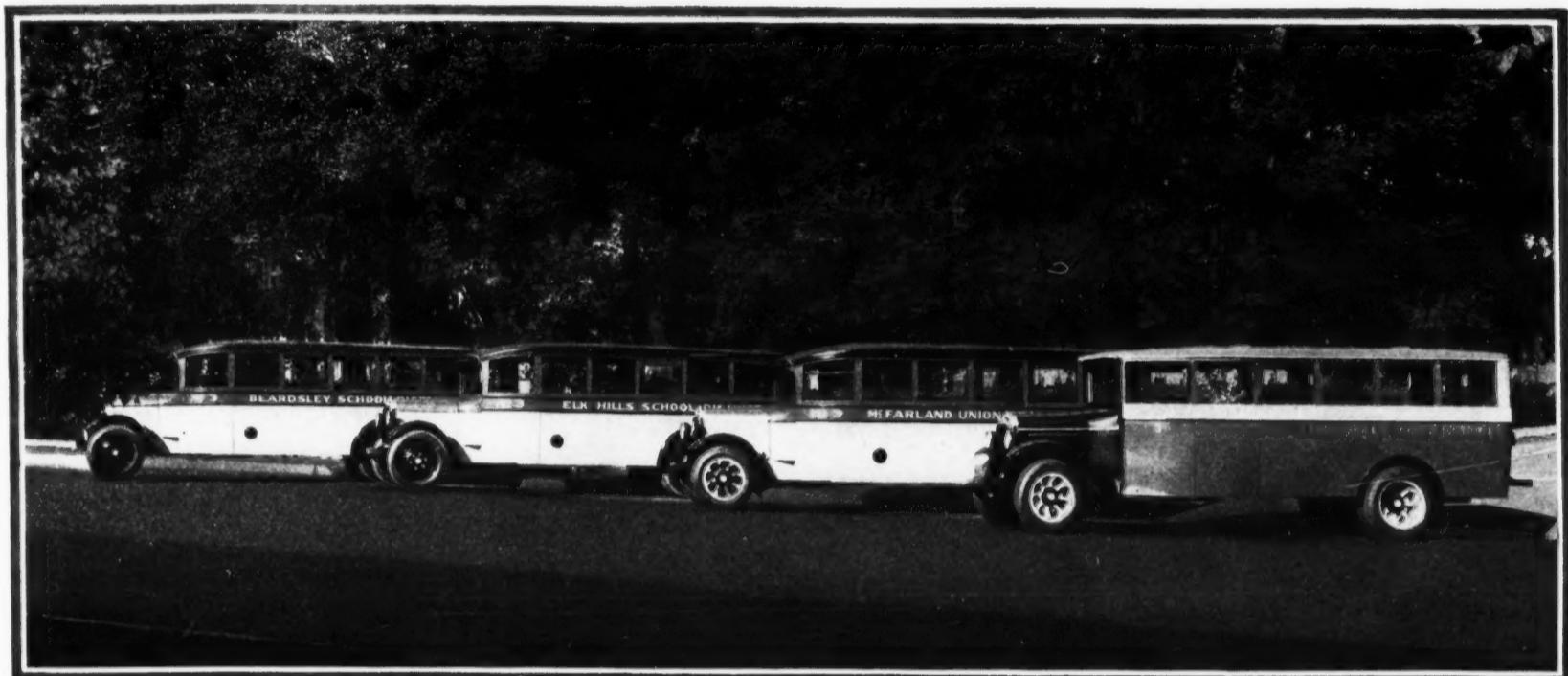
TABLE III. Schedule of Clerical Assignment — Attendance Office — Elementary-Junior High Schools (Grades 1-9)

Enrollment Interval	ATTENDANCE — OFFICE STAFF				Cost per Pupil Enrolled*
	Teacher Exec- utive (Hours per Week)	Principal's Clerk	Student Clerk (Hrs. per Day)	Maximum Total Cost	
501 - 600	6	1/14		577	\$1.50
601 - 700	6	1/14		671	1.03
701 - 800	7	1/14		765	1.02
801 - 900	8	1/14		859	1.01
901 - 1000	9		1	896	.94
1001 - 1100	10		1	990	.94
1101 - 1200	11		1	1,084	.94
1201 - 1300	12		1	1,178	.94
1301 - 1400	13		1	1,272	.94
1401 - 1500	14		1	1,366	.94
1501 - 1600	15		1	1,460	.94

TABLE IV. Schedule of Clerical Assignment — Attendance Office — Junior High Schools (Grades 7-9)

Enrollment Interval	ATTENDANCE — OFFICE STAFF				Cost per Pupil Enrolled*
	Teacher Exec- utive (Hours per Week)	Principal's Clerk	Student Clerk (Hrs. per Day)	Maximum Total Cost	
501 - 600	10		1	990	\$1.80
601 - 700	10		1	990	1.52
701 - 800	10		2	990	1.32
801 - 900	10		2	1,040	1.22
901 - 1000	12		2	1,228	1.29
1001 - 1100	14		2	1,416	1.35
1101 - 1200	16		2	1,604	1.39
1201 - 1300	18		2	1,792	1.43
1301 - 1400	20		3	2,030	1.50
1401 - 1500	20		3	2,030	1.40
1501 - 1600	22		3	2,218	1.43

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A CLERICAL SURVEY OF A CITY SCHOOL SYSTEM—II

(Continued from Page 72)

difficult to assign teacher time which will be satisfactory to her and be reasonable to the school system.

In view of these facts, it was recommended that the handling of school funds be designated a clerical task and that provision be made to

TABLE V. Schedule of Clerical Assignment—Clerical Assistance to the Librarian for Textbook Work Elementary-Junior High Schools (Grades 1-9) TEXTBOOK CLERICAL TIME

Enrollment Interval	Principal's Clerk	Student Clerk (Hrs. per Day)	Maximum Total Cost	\$ Cost per Pupil Enrolled
501 - 600	1/14		\$107	.20
601 - 700	1/14		107	.16
701 - 800	1/14		107	.14
801 - 900	1/14		107	.12
901 - 1000		1	50	.05
1001 - 1100		1	50	.05
1101 - 1200		1	50	.04
1201 - 1300	2	100	.08	
1301 - 1400	2	100	.07	
1401 - 1500	2	100	.07	
1501 - 1600	2	100	.06	

TABLE VI. Schedule of Clerical Assignment—Clerical Assistance to the Librarian for Textbook Work Junior High Schools (Grades 7-9) TEXTBOOK CLERICAL TIME

Enrollment Interval	Principal's Clerk	Student Clerk (Hrs. per Day)	Maximum Total Cost	\$ Cost per Pupil Enrolled
501 - 600		1	50	.09
601 - 700		1	50	.08
701 - 800		1	50	.07
801 - 900		1	100	.12
901 - 1000		1	100	.11
1001 - 1100	2	100	.10	
1101 - 1200	2	100	.09	
1201 - 1300	2	100	.08	
1301 - 1400	2	100	.07	
1401 - 1500	2	100	.07	
1501 - 1600	2	100	.07	

TABLE VII. Schedule of Assignment* Elementary-Junior High Schools (Grades 1 to 9 inclusive)

Enrollment Interval	Principal's Office				Attendance Office				Text. Clerk				Total Positions			
	Pr. Clerk	Trs.	Clk.	St.Cl	Prin. Hrs.	Prin.	Hrs.	Prin.	Clk.	St.Cl	Tr.Ex	Pr. Clerk	Hrs.	Maximum	Cost per	
501 - 600	5/7	1/7			5	1/14		1/14				5	1	\$1,970	\$3.58	
601 - 700	5/7	1/7			6	1/14		1/14				6	1	2,064	3.18	
701 - 800	5/7	1/7			7	1/14		1/14				7	1	2,158	2.88	
801 - 900	5/7	1/7			8	1/14		1/14				8	1	2,252	2.65	
901 - 1000	6/7	1/7			1	9		1				9	1	2,496	2.63	
1001 - 1100	6/7	1/7			1	10		1				10	1	2,590	2.47	
1101 - 1200	6/7	1/7			3	11		1				11	1	2,834	2.47	
1201 - 1300	5/6	1/6			6	12		1				12	1	3,078	2.47	
1301 - 1400	5/6	1/6			1/2	13		1				13	1/2	3,412	2.53	
1401 - 1500	5/6	1/6			3	14		1				14	1/2	3,656	2.52	
1501 - 1600	5/6	1/6			1/2	6	15	1				15	1/2	3,900	2.52	

*The fractions indicate the proportion of time spent in the type of work indicated, i.e., treas. 1/7 means that one seventh of the time of the principal's clerk has been allocated to treasurer's duties. The time of teacher executives (Tr. Ex) is in hours per week, while that of student clerks is in hours per day.

TABLE VIII. Schedule of Assignment* Junior High Schools (Grades 7 to 9 inclusive)

Enrollment Interval	Principal's Office				Attendance Office				Text. Clerk				Total Positions			
	Prin. Clerk	Trs.	St. Cl	Tr.Ex	Prin.	Hrs.	Prin.	Hrs.	Prin.	Clk.	St. Cl	Tr. Ex	Pr. Cl. & Treas.	Hrs.	Maximum	Cost per
501 - 600	7/8	1/8	1	10	1		1		1				1	3	\$2,590	\$4.71
601 - 700	6/7	1/7	1	10	1		1		1				1	3	2,590	3.98
701 - 800	6/7	1/7	1	10	1		1		1				1	3	2,590	3.45
801 - 900	5/6	1/6	2	10	2		2		2				2	6	2,740	3.22
901 - 1000	5/6	1/6	2	12	2		2		2				2	6	2,928	3.08
1001 - 1100	4/5	1/5	5	14	2		2		2				2	9	3,266	3.09
1101 - 1200	1 3/10	1/5	2	16	2		2		2				2	6	4,054	3.52
1201 - 1300	1 1/4	1/4	2	18	2		2		2				2	6	4,242	3.39
1301 - 1400	1 1/4	1/4	4	20	3		3		2				2	9	4,580	3.33
1401 - 1500	1 3/4	1/4	1	20	3		3		2				2	6	5,180	3.57
1501 - 1600	1 3/4	1/4	1	22	3		3		2				2	6	5,368	3.46

*The fractions indicate the proportion of time spent in the type of work indicated, i.e., treas. 1/7 means that one seventh of the time of the principal's clerk has been allocated to treasurer's duties. The time of teacher executives (Tr. Ex) is in hours per week, while that of student clerk is in hours per day.

have the principal's clerk in each school assume this responsibility.

The Basis of Assignment—All School Offices

In accordance with a previously mentioned policy that the elementary junior high schools and the junior high schools be treated separately, the suggested staff of each type of school is herewith presented. The maximum total cost has been computed upon the basis of \$1,500 for a junior-high-school principal's clerk, \$1,080 for an elementary principal's clerk.

Following are a few typical Libbey-Owens installations

Providence High School, Chicago

Grosse Pointe High School
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Roosevelt High School, San Jose, Calif.

Dr. M. E. Dodd College for Girls
Shreveport, La.

Morgan Hall, Harvard Business School
Cambridge, Mass.

Woodrow Wilson High School
Dallas, Texas

Nathan Hale School, Cleveland, Ohio

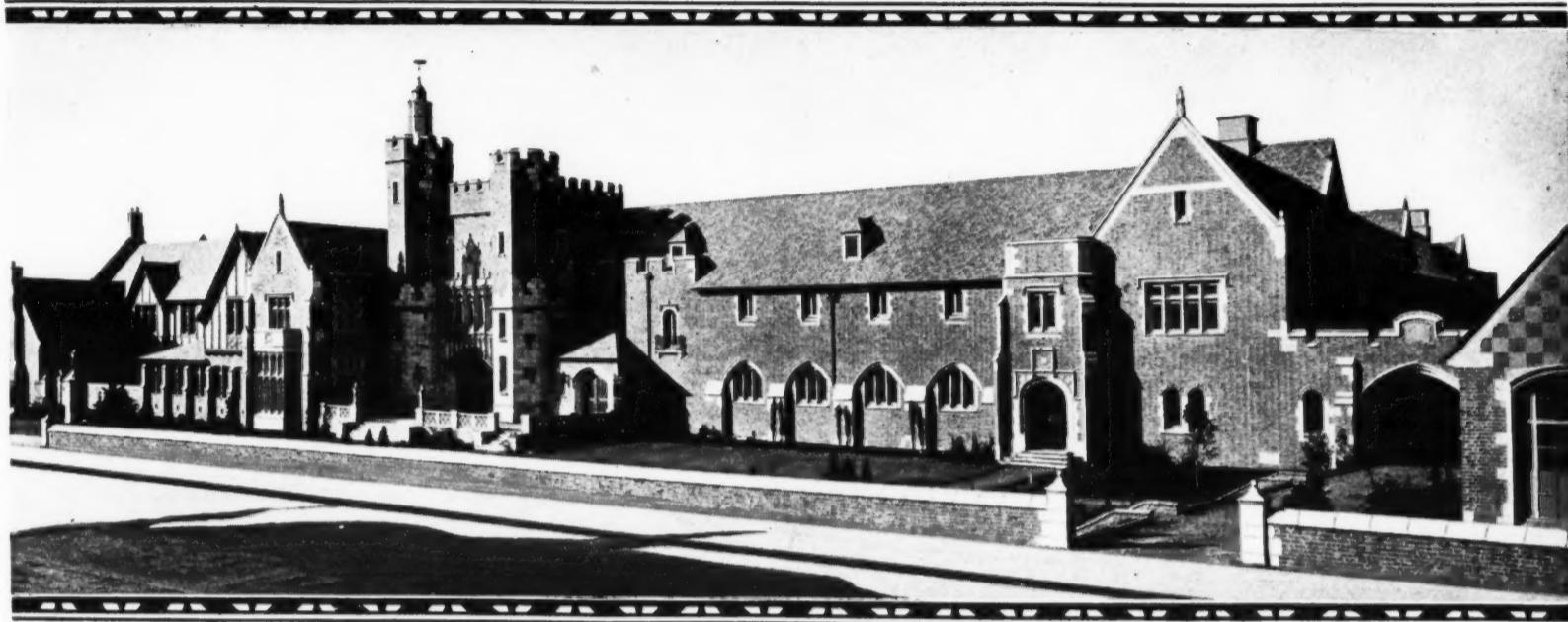
C. M. Bardwell School, Aurora, Ill.
(illustrated above)

With the several policies mentioned heretofore guiding the set-up for the suggested office staff, the following table has been prepared which presents the suggested staff for the principal's office for schools with enrollments between 501 and 1,600 pupils.

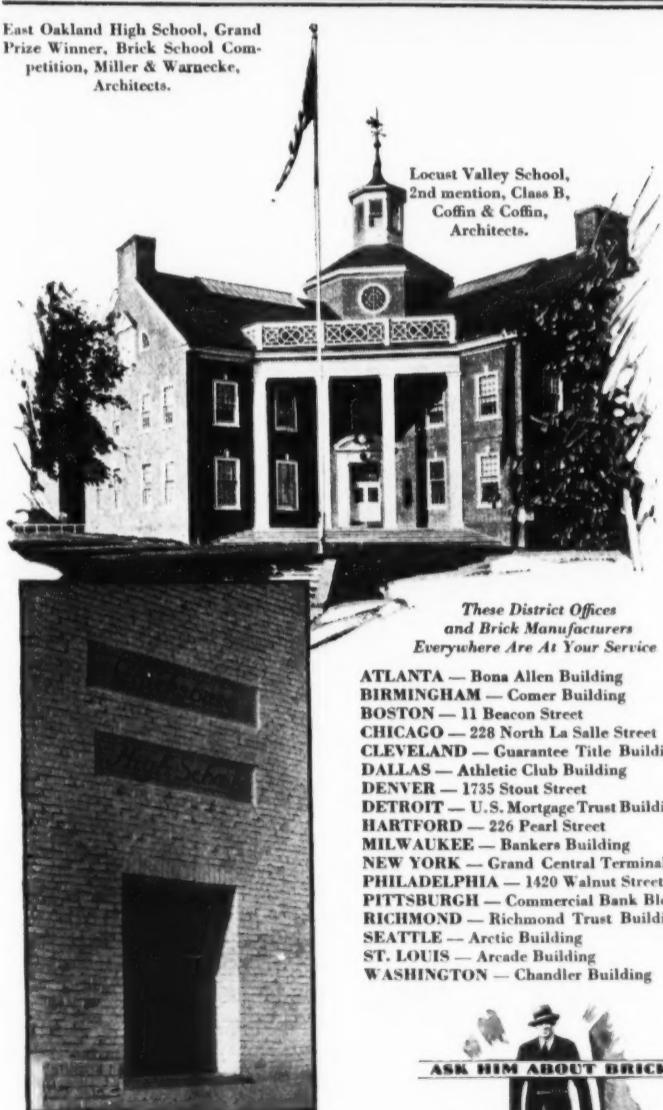
The fractional time indicated in the first three columns of the tables presented in this article represents the time allotment of the clerk to each of the offices or duties indicated. For example, in Table I, the clerk is assigned to spend five sevenths of her time in the work of

(Concluded on Page 76)

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Coffin & Coffin,
Architects.

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DALLAS — Athletic Club Building
DENVER — 1735 Stout Street
DETROIT — U.S. Mortgage Trust Building
HARTFORD — 226 Pearl Street
MILWAUKEE — Bankers Building
NEW YORK — Grand Central Terminal
PHILADELPHIA — 1420 Walnut Street
PITTSBURGH — Commercial Bank Bldg.
RICHMOND — Richmond Trust Building
SEATTLE — Arctic Building
ST. LOUIS — Arcade Building
WASHINGTON — Chandler Building



Clarksburg High School, First Prize,
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"Fenmark" Windows for Schools

(Concluded from Page 74)

the principal's office, one seventh as school treasurer, and the balance in attendance and textbook work as indicated in Tables III and V respectively. The method of presentation will be understood clearly by examining the complete schedule of assignment as shown in Table VII and Table VIII at the close of this article.

The Attendance Office

A minimum of two periods per day of teacher time was deemed necessary to properly carry into effect the procedure for handling attendance in the junior high schools; however, in the elementary junior high schools the full two hours per day were not allowed until the enrollment reached the 1001-1100 interval. This difference is due to the nature of attendance accounting in the elementary division of schools and to the fact that the pupils do not move from room to room nor from teacher to teacher during the school day.

With the above consideration in mind, the attendance staffs of the schools were set up as is shown in Tables III and IV.

The Handling of Textbooks

Unlike the senior high schools, the textbook work of the junior high schools is done mainly by the librarians. Student help is used wherever possible and in a few schools part of the time of a student clerk or civil service clerk has been made available.

The value of teacher time spent in textbook work was analyzed and resulted in the following recommendation: "Since the work of handling textbooks is largely of a clerical nature, and since the time of the librarian spent in handling the textbooks is thus diverted from instructional to clerical duties, it is recommended that provision be made to give some clerical service to junior-high-school librarians so that a major portion of the time now spent in the above-men-

tioned clerical work will revert to instructional use."

This policy entered into the suggested staff for each school and into the basis of assignment of clerical help.

The schedule of assignments to the various offices in the junior high schools has been made in an endeavor to supply adequate clerical help with the maximum of economy. The cost involved in assigning teachers to tasks which can just as efficiently be handled by clerks is not usually realized until careful study makes them evident.

Table VII, which follows, presents the complete schedule of clerical assignment for junior high schools having grades 1 to 9.

Table VIII presents the schedule of clerical assignment for junior high schools having only grades 7, 8, and 9.

THE SCHOOL BOARD, THE TEACHER, AND THE TRUANCY LAW

The mere existence of a law is of little consequence. Any law, to be effective, must be enforced. The truancy law, as a rule, is not adequately enforced because of a lack of cooperation of school authorities and teachers. If this is not the principal cause of a lax enforcement, it is at least a very great factor toward a disregard of the law.

In cities and larger school districts, of course, where a truant officer has been appointed by the board of education, the problem of requiring children affected by the law to attend school is not as great as it is in the small rural districts where no local truant officer is available and where the teacher, perhaps, must act in this capacity to some extent.

The members of the school board can be of very great assistance to the teacher in the rural school if they are willing to do so.

At the beginning of school it becomes the duty of the clerk of the school board to furnish the teacher with a list of the names and addresses of all pupils living within the district, who come within the provisions of the compulsory-education act. It is necessary also to furnish her with the names and addresses of the parents and guardians of such children. After the teacher has been supplied with this list, it becomes her duty to compare it with her enrollment to determine whether or not all pupils are in attendance. If she discovers certain instances where pupils are trying to evade the law, the same must be reported to the county superintendent. The latter will report the facts to the county truant officer for immediate action.

The foregoing, which is the common method of procedure in the rural schools, demonstrates the fact very plainly that any faltering on the part of any official connected with the enforcement of the law will constitute a barrier, and impose a greater hardship on some conscientious official who desires that the law be enforced at all costs. It begins with the school board, logically. And if the board refuses to cooperate or tries to evade the issue, what can the teacher do under such circumstances? Many instances occur where the teacher is not furnished this list by the board.

Other instances, occasionally, are to be observed where the list has been compiled in rather a haphazard manner. Many names that should be on it are not on it. And sometimes pupils who do not come under the provisions of the law are included in the list. The latter mistake could easily cause the teacher some trouble. For in the event of her reporting to the county superintendent the name of some pupil whom the law does not affect, one can imagine what sort of feelings may be aroused with people of certain types.

(Concluded on Page 78)



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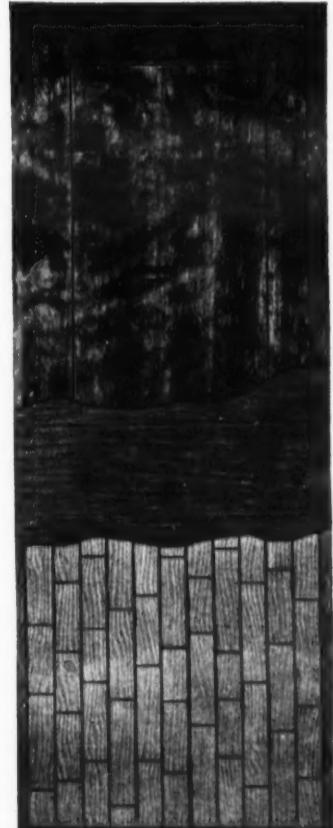
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Looking down from the top of the School of Medicine upon the central unit of the buildings on the new campus. In the foreground is the Law building which adjoins the Library. In the left background are the dormitory groups on the western side of the quadrangle. The right background shows the tile roofs of the School of Religion, the Union, and the Auditorium.

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(Concluded from Page 76)

This list is easily compiled. And it should be done with great care. But after its compilation, the board, it seems to me, should not feel that in this connection the work is through. For in reality it has only begun. The members should carefully keep an eye on conditions in the district relative to the attendance of the pupils. Sometimes misstatements are made in regard to age. Occasionally new families move into the district who dislike to start their children until the beginning of a new term. At least this is a common excuse under such circumstances.

The board, by keeping an eye on the district, so to speak, can assist the teacher wonderfully in doing her part toward the enforcement of the law. Besides, occasionally, teachers are delinquent and careless in matters pertaining to the truancy law. This is certainly a matter that merits the attention of the board. Public-school attendance is rapidly growing all over the country. And to some extent it owes its growth to the truancy law. But there is yet much to be done in this regard. And it can be done, only through a systematic cooperation of all school officials and teachers. — F. Y. Harper.

of pupil enrollment per class is 20, and I am sure you will agree with the writer that the combined wisdom of principal, vice-principals, and department heads is not only desirable, but essential for any satisfactory solution of the problem.

The Method of Procedure

We attacked the problem in this fashion:

First. An up-to-date "summary of enrollment in recitations" was secured from each department head. The total pupil load of the department, with the average per class, was tabulated. The pupil load and the periods of class assignment of each teacher were recorded.

Second. Reports were assembled and tabulated, showing the prospective new enrollment which is scheduled to reach this school, by transfer from tributary schools at the beginning of the new semester.

Third. Reports from individual pupils enrolled in this school were tabulated, giving an estimate of the total drop-out at the end of the semester due to graduation, change of residence, withdrawal to enter occupations, and travel. Special course changes and desired electives were also listed.

Fourth. A comparison and study was made of the data secured from approaches *two* and *three*, to determine to what extent prospective enrollment would exceed present enrollment and what effect elective classes and course changes would have upon the elimination of existing classes and those to be new-formed.

Fifth. Having estimated the elimination and addition of classes, in accord with the results of previous study under paragraph four, we determined whether or not any department would be in a position to eliminate the entire time of one or more teachers. If this determination would satisfy the superintendent's request "to reduce," by offering a sufficient number of teachers who would be placed in other schools, the solution of the problem would be reached. But this quick and comparatively painless solution was an unlikely one. We found that only one or, at the most two, departments could

(Concluded on Page 80)

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A Problem in Administration; or How to Reduce the Faculty

Theodore Fulton, Principal, Jefferson High School, Los Angeles, California

The problem was not to reduce waist lines of individual teachers, but to carry out the instructions from the superintendent's office, which informed us that our school was entitled to 76.9 teachers upon the approved basis of 21.5 pupils per teacher.

This came as a body-blow, and we would have felt like "taking the count," if we had not already become somewhat seasoned by previous shocks of a similar nature. At the time, our faculty numbered 84. Hence, the specific problem was to release approximately 7 teachers from the group, in order that they might be assigned to schools of the city which were under-teachered.

There are at this time in the city of Los Angeles, 23 junior high schools and 32 senior high schools, many of which must add to their respective faculties each semester, because of the rapidly increasing enrollment.

Teachers Easily Transferred

Since certain subjects, like English, history, mathematics, and science, are required in greater or less degree in all curricula, teachers of these same subjects are most easily assigned by transfer. By the same token, it is clear that arrangements for transfer are more difficult for teachers of elective subjects, including vocational, practical arts, academic, and commercial.

Upper-grade subjects, prerequisites, state-board requirements, universities demands, and city basic-course limitations practically force the maintenance of numerous small classes, to insure graduation of the pupils from their elected courses of study. Add to these before-mentioned delimitations, and criteria and prerequisites, or what have you? the endeavor, as instanced in this school, to maintain several classes in which the legal maximum limit

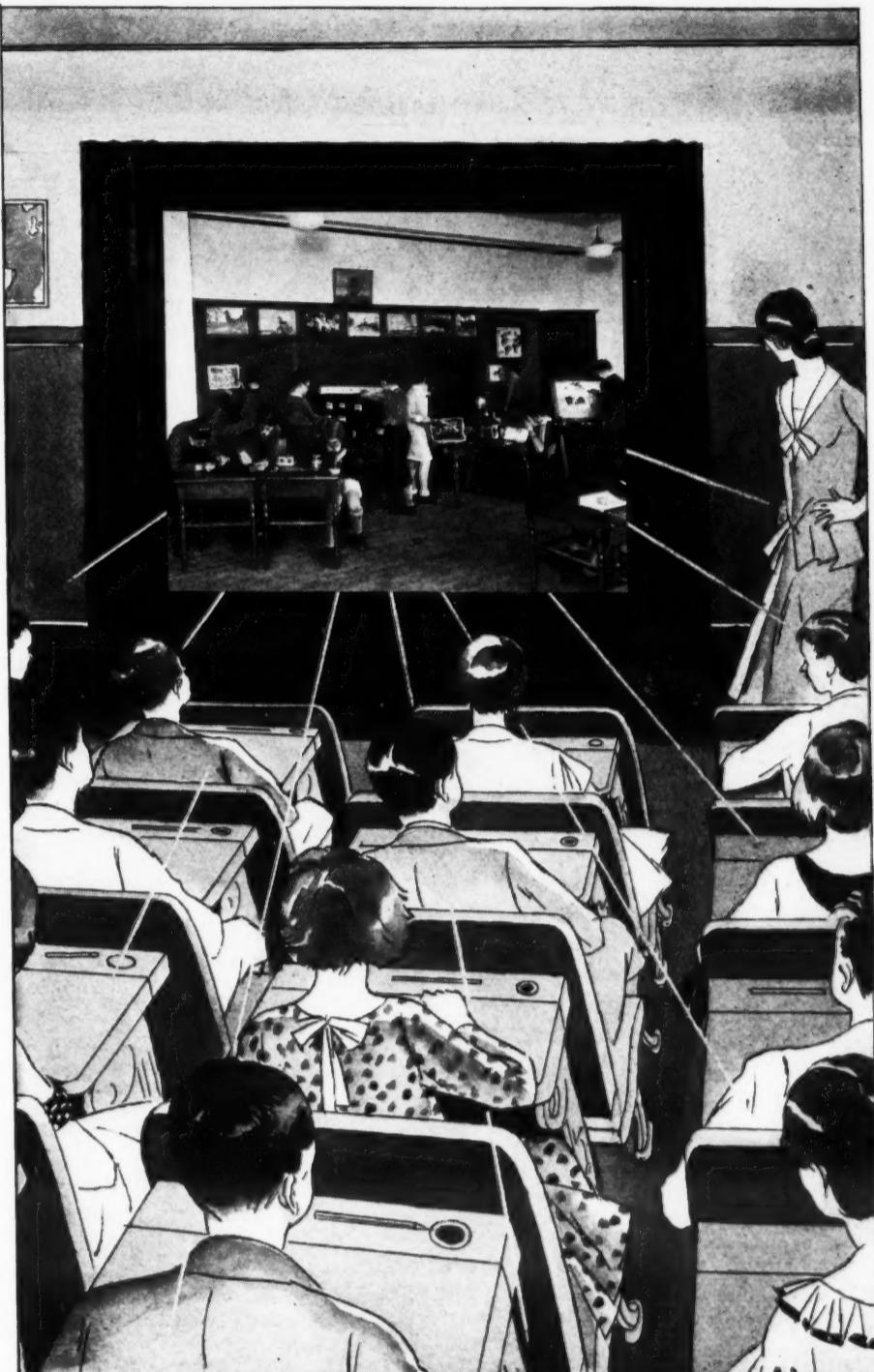
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Pictures are being tested to determine their place in a definite teaching plan. Electrical Research Products Inc. are co-



Scene from "A Case for Professional Study, Grade 6."

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Seven Years of Hard Service—

*Treads as Non-Slip Now
as Originally*

WHEN this fine Junior High School was built seven years ago all treads were nosed with Alundum Stair Tile (white granite). Recent examination shows that the non-slip quality of the tile is as effective now as when installed and there are no signs of wear.

Alundum Tile's non-slip feature gives permanent protection against slipping accidents and its durability reduces maintenance to the minimum. Thus the use of this tile is real economy.

A type of steel construction that is especially suitable for Alundum Stair Tile is illustrated at the right. The weight of the steel and the thickness of the concrete fill provide sufficient rigidity to prevent vibration. There is ample cement in contact with the tile to give secure bonding.

NORTON COMPANY, WORCESTER, MASS.
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T-260

(Concluded from Page 78)
release full-time teachers. Hence, we passed to approach six.

Sixth. An estimate and tabulation somewhat as follows was made:

Name of Department	Periods of Teacher Time			
	Available Now	Will Need	Can Spare	Fraction
English	52	52	0	.0
Social Science	36	34	2	.4
Foreign Language	14	13	1	.2
Drafting	30	24	6	.75
Music	16	15	1	.17
Mathematics	19	16	3	.6
Commercial	60	58	2	.33
Science	31	29	2	.33
Home Economics	53	53	0	.0
Art	19	17	2	.25
Boys' Physical Education	22	20	2	.33
Girls' Physical Education	22	20	2	.33
Mechanic Arts	46	36	10	1.25
Metal Trades	38	32	6	.75
	458	419	38	5.70

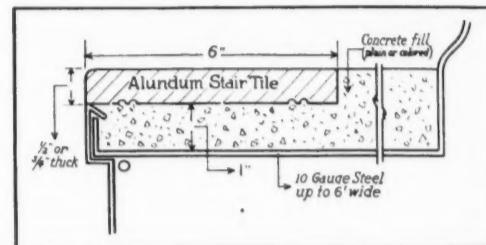
The foregoing data is based on standard teacher-load of departments, as applied to the estimates secured from tributary schools, and compared with the last semester's program.

By inspection of Table I, we see at a glance that the drafting department can spare .75 of one teacher unit, the mathematics department .6 of a teacher unit, the mechanic arts department 1.25 teacher units, and the metal trades department .75 of a teacher unit.

The Selection of Teachers for Release

The following determinations were made immediately. We offered to release one teacher from the drafting department — some crowding of classes resulted. One teacher of mathematics might go — two periods of teacher-time from other departments must fill the gap thus created. One teacher from the mechanic-arts department might go — this department can still relieve pressure in other departments.

Thus, we satisfied reduction requirements to the extent of three members of our too-numerous faculty. But this was not enough; we studied the data (Table I) more closely. The excess of teacher time in the metal-trades department was found to exist



A type of steel stair construction especially suitable for use with Alundum Stair Tile



Clifton Park Junior High School, Baltimore, Md.

in the persons of two specially certificated men, neither of whom could be transferred to the other's work. Therefore, reduction in this department was not to be considered, until all other means fail. The problem of certification continually arises. The only help to be secured from the boys' or the girls' physical-education departments was by way of assignment to the care of study halls, thus releasing some academic teachers for more classwork. Commercial, music, and art departments present similar problems.

Turning our consideration, for the moment, away from Table I, we ascertained through the heads of departments, which of their teachers would be willing to undertake certain work outside of their respective departments. We found that the commercial department could help out in mathematics, so, also, can the social-science department. Foreign language could assist the English, who could assist

science. So a tentative offer was made to release one teacher from the science department.

Now our reduction listed four teacher units, and since one or two special groups of pupils might be sent to us from tributary schools, we rested from our labors and reported our findings to the assistant superintendent who supervises this high school.

The selection of the individuals to be taken from a faculty depends upon the rule — "The last assigned shall be the first to go" if no special distinctions of subjects taught are present.

Our new term's master-program was made, after due consideration of the teacher reductions just mentioned. However, we shall keep the teachers as members of our faculty and rearrange the master-program. Should no need for the teacher units develop in other senior or junior high schools, thus, a puzzling problem may either be solved, or merely postponed.

Answers to Questions

Ben W. Frazier

Q.: What is the present proportion of men and of women teachers? Is the relative proportion of men increasing or decreasing?

A.: About one teacher in five is a man. The proportion of men is now slowly increasing. The proportion had been decreasing for a half century prior to 1920.

Q.: Where can I secure condensed presentations or digests of current periodical literature in the field of education?

THE GREAT EXPERIMENT

Our government is the greatest experiment in democracy in all history. Whether it shall stand or fall depends upon the education of its future citizens.

—Superintendent Frank Cody,
Detroit, Michigan

A.: Write to Loyola Educational Digest, 3441 North Ashland Avenue, Chicago. They issue digests ten times a year of important articles on education.

Q.: How much is spent yearly in the United States on public-school education?

A.: More than \$2,100,000,000 was spent during 1929 on public-supported elementary and high schools.

Q.: Where can I get a complete list of private teachers' agencies? What do they charge for their services?

A.: Write to the Office of Education, Washington, D. C., for their list, which is one of the best. The agencies usually charge about 5 per cent of the first year's salary of the teacher. You will find a number of reliable agencies listed in the advertising columns of the AMERICAN SCHOOL BOARD JOURNAL.

Q.: What is the average salary of teachers in state normal schools and teachers' colleges?



Making School Days Happier!

We have shortened hours. We have done away with corporal punishment. We have devised methods of making school-work easier . . . more like play. And we are constantly making changes in the physical appointments of our schools, that they may be more comfortable, cheerful and livable.

Specialists in school architecture, decoration and education, all agree that colorful surroundings have a definite effect on the mental comfort and cheerfulness of pupils—and have discovered that one of the most desirable and practical ways to bring color into the schoolroom is to install resilient floors of **Sealex Linoleum** or **Sealex Treadlite Tile**.

Sealex floors are as far removed from the hard, drab-looking school floors of yesterday as the modern fountain pen from the old-fashioned stylus. They are not only colorful — they are quiet, comfortable and sanitary, as well! This last, because **Sealex** materials are spot-proof and stain-proof — easy to clean. Spilled things don't matter!

(See next page)



For floors in kindergartens, gymnasiums, etc., special decorative or utilitarian designs may be inlaid in contrasting colors—thus providing permanent markers for games, class formations, etc.

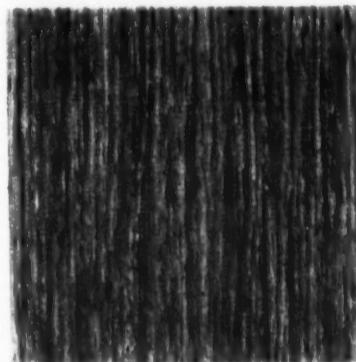
(Continued from preceding page)

Since neither wear nor every-day accidents will dull or mar their beauty, *Sealex* materials justify the use of pleasing colors underfoot.

Sealex floors may be as simple and inexpensive, or as richly decorative, as the location warrants.

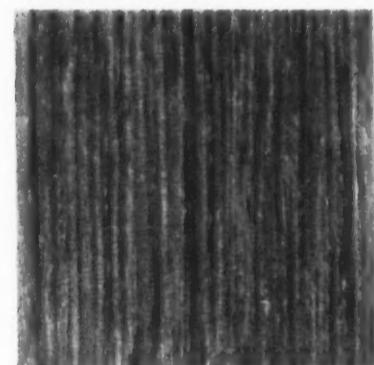
For ordinary class and study rooms, simply designed floors, such as *Sealex* Battleship Linoleum or *Sealex* Jaspé Linoleum, are indicated, and their soft harmonious tones are particularly pleasing and restful.

But for such locations as the entrance hall, dining-room, library, private office, etc., nothing could be more appropriate than designed-to-order floors of *Sealex*.



New Jaspé Effects

The new pastel shades in *Sealex* Jaspé Linoleum will be welcomed by school executives who realize the possibilities of this subdued, yet decorative, type of floor.

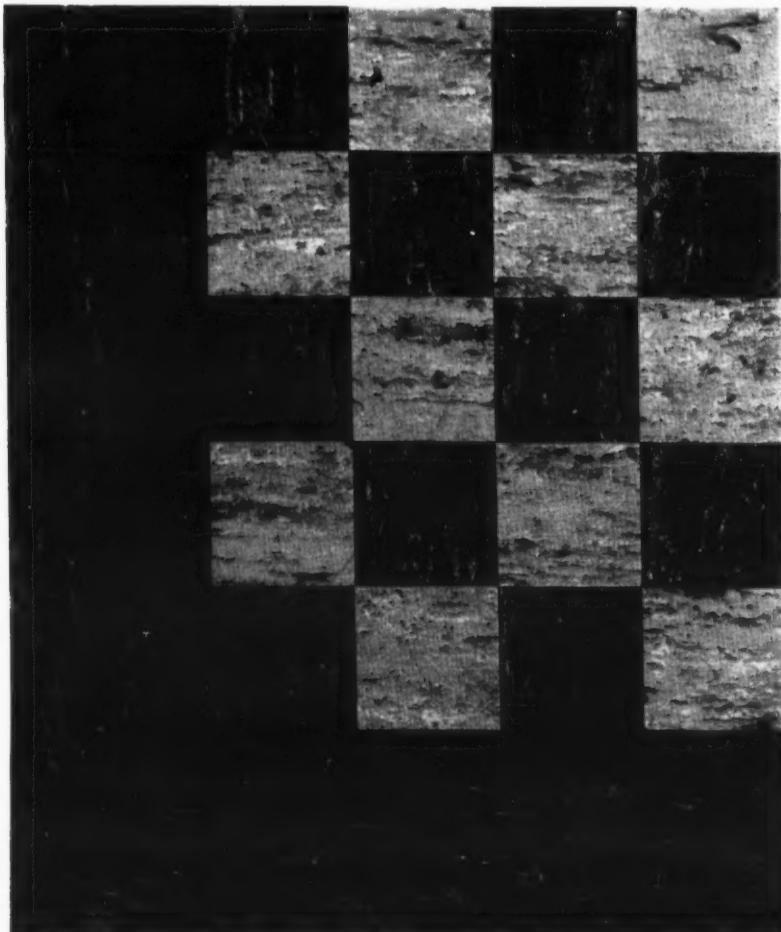


Here are illustrated two restful colors of *Sealex* Jaspé Linoleum. Above: "Roseglow." At right: "Lake-blue."

Treadlite Tile—plain or marble-ized. These cork-composition tiles offer distinctive beauty. The floor design at the left illustrates the use of two of the many tile colors available.

It is a very simple matter to have *Sealex* floors installed in any school either as part of the original equipment, or over the present floors. Let us explain our nation-wide expert installation service, as rendered through Authorized Contractors of Bonded Floors. We'll gladly confer with you, no obligation.

Write us for further information, or for our authoritative booklet, "Facts You Should Know about Resilient Floors for Schools."



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Chlorine carries its sterilizing power *into the pool*, which is a fundamental principle in swimming pool sanitation. Regardless of the bathing load a clean, safe pool may be assured by proper adjustment of the chlorine solution using W & T chlorine control equipment.

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A.: The median average salary of professors in normal schools and teachers' colleges that differentiate instructors by faculty ranks is about \$3,000 on a basis of nine months service, and \$3,450 on a basis of nine months service and summer session teaching. Instructors other than professors in these institutions receive about \$2,200 for nine months, or \$2,600 for nine months and summer session. The typical president or principal receives about \$6,000 annually.

Q.: How much money do high-school students need to enter college, with a view toward working their way through? Where is the best place to go? What is the cost in the average college or university for a year's work?

A.: You should have enough money to pay your expenses for the first term or semester, say from \$200 up. State universities, and state colleges and normal schools in large cities, offer good opportunities, but not the only opportunities. The average minimum expense in state universities is about \$500, and in all higher institutions about \$750. This does not include personal expenses.

Q.: To whom should applications for teaching positions be addressed? Where can I get a list of such authorities?

A.: For public-school positions, address the superintendents of schools, a list of whom may be found in Office of Education Bulletin (1929) No. 1. Educational Directory, which may be secured from the Government Printing Office, Washington, for 30 cents. Ascertain if possible if suitable vacancies exist before making formal application.

Q.: In what fields, if any, is there an oversupply of teachers? An undersupply?

A.: It is unsafe to generalize for the country as a whole; standards of training, requirements for employment, and numerous other factors differ greatly among the states and within the states. In general, an apparent oversupply of arts and science high-school teachers, and of elementary teachers, is reported from many sections; and undersupply of teachers of special or non-academic subjects, such as music, physical education, art, and vocational subjects is reported from some sections. There is beyond question many reports of teacher oversupply at present, but the "oversupply" is possibly an

apparent one only, due to the large number of individuals with inferior training or experience who are seeking teaching positions. Such "oversupply" is automatically cut down when standards of employment are raised sufficiently high.

Q.: How many private high schools and academies are there in the United States? Is the number increasing or decreasing?

A.: In 1928, 2,448 such schools reported to the Office of Education, an increase of only 8.9 per cent since 1915. The number of pupils enrolled, however, has increased 73.6 per cent during the same period.

Q.: What does it cost the state to train a teacher?

A.: The answer depends upon the size of the state institutions. According to figures of the United States Office of Education, reported costs in teachers' college for nine months' work, on a basis of all current expenditures, ranges from an average annual per capita cost of \$263.46 in colleges with enrollment of 2,000 or more, to a cost of \$439.67 in colleges with an average annual enrollment of fewer than 400 students. Costs in the normal schools are somewhat less, and in the universities more.

Q.: What is the largest college or university? What is meant by the term "Empires of Higher Education"?

A.: The answer depends upon the definition of "largest." According to the latest figures available, Harvard University has the largest endowment; \$82,820,000. Agricultural and Mechanical College of Texas has the largest campus and grounds, including farms: 14,295 acres. Yale University has the highest evaluation of buildings: \$39,488,279. Columbia University in 1927-1928, had the largest enrollment of resident students: 36,688; but the University of California had the largest total enrollment, including class extension and correspondence students: 66,000. The term "Empires of Higher Education" probably arose as the result of the increase of institutions, such as California and Columbia, that have attached to their organization junior colleges within the regions served by the larger or parent institutions. The huge size of some institutions may also have suggested the term.

Q.: How many students attend high schools or other secondary schools in the United States?

A.: According to the Office of Education, there were 4,132,125 such students in 1926. This includes only students in the conventional four years of preparatory or public-high-school grades. The number in 1910 was 1,111,393, but it is reported that the rate of growth has been slowing up somewhat for the past four or five years.

Q.: What proportion of high-school graduates at the present time go to college or other higher institutions of learning?

A.: Nearly 50 per cent.

SCHOOL LAW

School Lands and Funds

School facilities must be made available to every educable child, and all land in the county must be embraced in some school district (Hemenway's code of 1927, §8674; Miss. constitution of 1890, §§201, 205, 207). — Myers v. Board of Supervisors of De Soto County, 125 Southern reporter 718, Miss.

State-aid funds apportioned to common-school districts based on separate or minority scholastic enumeration must be used for separate or minority schools (Okla. constitution, art. 11, §3; Okla. complete statutes of 1921, §10322). — Board of Commissioners of Okmulgee County v. School Dist. No. 25, Okmulgee county, 283 Pacific reporter 1008, Okla.

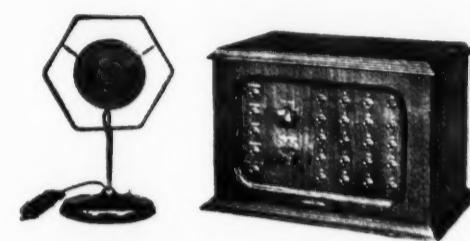
Where warrants were drawn against the funds payable to an independent school district on account of separate scholastic enumeration, an independent district which has received benefits cannot recover judgment therefore against the county (Okla. complete statutes of 1921, §10315; constitution, art. 11, §3). — Board of Commissioners of Okmulgee County v. Board of Education of City of Okmulgee, 283 Pacific reporter 1010, Okla.

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the Central Unit

"Selective Address" System for small or large school building

Room Control from main office for Radio, Phonograph, and Microphone

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Our Multi-Trol is especially designed for schools where a small "Selective Address" system is desired, limited to twenty loud speakers. It can easily be hooked up to any radio set, and radio, phonograph music or voice can be transmitted to any or all rooms where loud speakers are installed.

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The courts cannot review the discretion of the county superintendent of schools in passing upon contracts between school-district trustees and teachers. — *Duncan v. Bowman*, 22 Southwestern reporter (2d), 683, Tex. Civ. App. Where there is absence of fraud or abuse of discretion, the court could not compel the board of a consolidated district to maintain elementary schools in original school districts (Tex. revised statutes of 1925, arts. 2682, 2806 et seq.). — *Dyer v. Consolidated School Dist. No. 5, Callahan County*, 22 Southwestern reporter (2d), 712, Tex. Civ. App.

Schools and School Districts

A school district cannot be changed to deprive an educable child of school facilities within convenient reach (Hemingway's code of 1927, §8674; Miss. constitution of 1890, §§201, 205, 207). — *Myers v. Board of Supervisors of De Soto County*, 125 Southern reporter 718, Miss.

School authorities cannot so run boundaries of a school district as to gerrymander educable children of the district out of school facilities. (Hemingway's code of 1927, §8674; Miss. constitution of 1890, §§201, 205, 207). — *Myers v. Board of Supervisors of De Soto County*, 125 Southern reporter 718, Miss.

County school trustees are held without jurisdiction to annex a common-school district to an independent school district, where the approval of the respective boards of school trustees was not obtained (Tex. revised statutes of 1925, art. 2922 A, as amended by the general and special laws of the 40th legislature, first called session of 1927, c. 78). — *Brockman v. Echols*, 22 Southwestern reporter (2d), 686, Tex. Civ. App.

Parents of children who have finished prescribed school courses, and who are attending high schools outside of the district, are not "patrons" when the high school is not conducted in the district. (Hemingway's code of 1927, §§8743, 8745). — *Myers v. Board of Supervisors of De Soto County*, 125 Southern reporter 718, Miss.

School-District Government

Authorizing the election of members of a board of school commissioners of the city of Charlotte at an election held for members of the city council

is held unauthorized (N. C. Priv. Laws of 1923, c. 78, as amended by the Priv. Laws of 1929, c. 142; C. S. 2900; Municipal Corporation act of 1917, plan D, 1, et. seq.). — *State v. Brenzler*, 151 Southeastern reporter 254, 198 N. C. 217.

The re-election of school directors did not deprive the court of the power to decide the guilt of charges in a petition for the removal, filed during the preceding term (Pa. school code, 217 Pa. statutes of 1920, §4699). — *In re Throop Borough School Directors*, 148 Atlantic reporter 518, Pa.

A final decree in a proceeding for the removal of school directors fixed the rights of the parties as of the date when proceedings were commenced (Pa. school code, 217, Pa. statutes of 1920, 4699). — *In re Throop Borough School Directors*, 148 Atlantic reporter 518, Pa.

School-District Property

A contractor cannot bind the surety by promises or agreements with one having knowledge of abandonment of the contract. — *Southern Surety Co. v. Eoff*, 22 Southwestern reporter (2d), 964, Tex. Civ. App.

A surety completing a school building contract and seeing a laborer on the job, and reaping the

SCHOOL HEALTH WORK

The physician's work in public schools has not received from either the public or the medical profession the recognition that its importance deserves. Reasons for this lack of recognition are many and diverse, but may be summarized under two heads: first, a general failure of realization on the part of the public of the paramount importance of children's health as a factor in their education; and, second, the failure of school physicians to organize, and to demand a more comprehensive and efficient type of service from their own members, and a better economic status.

—John L. C. Coffin, M.D.
Los Angeles, California

benefit of his services is held liable therefore according to the laborer's contract. — *Southern Surety Co. v. Eoff*, 22 Southwestern reporter (2d), 964, Tex. Civ. App.

Contributory negligence is a defense to the actions to recover against the county, municipality, or school district for injuries resulting from a dangerous condition of the streets, highways, or property (Calif. statutes of 1923, p. 675). — *Brooks v. City of Monterey*, 283, Pacific reporter 977, Calif. App.

School-District Taxation

The legislature cannot directly, or indirectly, tax property in an independent school district to furnish high-school facilities to nonresidents. — *City of Dallas v. Love*, 23 Southwestern reporter (2d), 431, Tex. Civ. App.

The taxpayers cannot question the validity of a rural high-school district in a proceeding to restrain the establishment but only by quo warranto in the state's name (Tex. revised statutes of 1925, arts. 2922 a. 2922 c.). — *Lewis v. Simmonds*, 23 Southwestern reporter (2d), 504, Tex. Civ. App.

Teachers

The directors of a consolidated district can contract with a teacher for a term longer than three months, notwithstanding the failure of the electors to determine that the school should be taught for a longer period (Crawford and Moses' Digest, §8952). — *Consolidated School Dist. No. 1 v. Fitzgerald*, 23 Southwestern reporter (2d), 263, Ark.

A school board with the power of boards in charge of common schools cannot make a valid contract with a teacher prior to the annual meeting. (Revised statutes of Kans. of 1923, 72—401, 72—406, 72—407, 72—701, 72—1027, 72—3507). — *Calloway v. Atlanta Rural High-School Dist. No. 2*, 284 Pacific reporter 377, Kans.

Legislative grants and prohibitions automatically become part of the agreement for the employment of teachers. — *Chehock v. Independent School Dist. of Marion*, 228 Northwestern reporter 585, Iowa.

(Concluded on Page 84)

For Adequate School Supervision

**Strowger P-A-X
is Essential!**



In the supervision of school activities, an automatic system of communication between the many class rooms and departments is an absolute necessity.

Principals and head-masters, in schools where Strowger P-A-X is installed, find this automatic interior telephone system an essential tool of efficiency. For checking up absentees, for obtaining immediate connections with custodians, for summoning pupils, for instructing teachers, as well as a variety of routine uses—Strowger P-A-X has practical uses without end.

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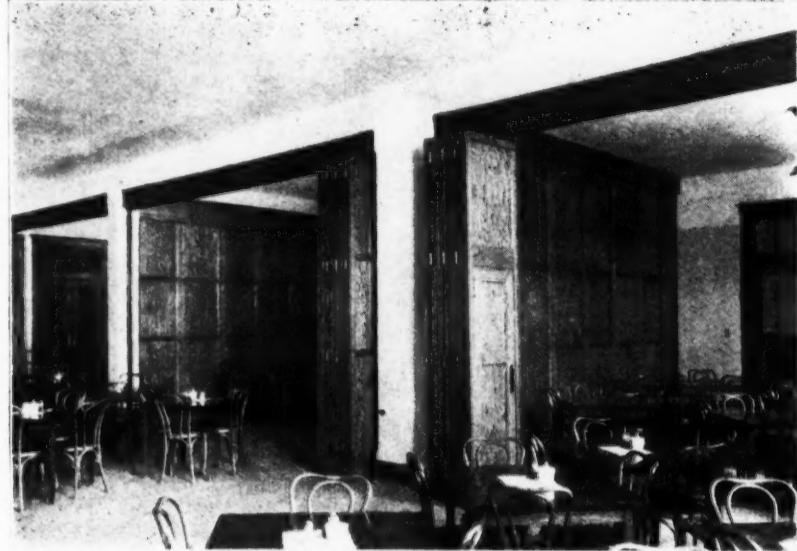
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CIRCLE A FOLDING PARTITIONS
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(Concluded from Page 82)

A law authorizing a school board to discharge a teacher for cause impliedly has provided for a notice to the teacher (Iowa code of 1927, 4237). —Chehock v. Independent School Dist. of Marion, 228 Northwestern reporter 585, Iowa.

An error of the school board in the conduct of a hearing for the discharge of a teacher for cause did not defeat the jurisdiction of the subject matter (Iowa code of 1927, §§4237, 4298, 4302). —Chehock v. Independent School Dist. of Marion, 228 Northwestern reporter 585, Iowa.

A teacher cannot recover the balance of the contracted compensation after the closing of a school for attendance below the statutory minimum (La. act No. 100 of 1922; La. civ. code, arts. 2021, 2026, 2031). — Neilson v. Lincoln Parish School Board, 125 Southern reporter 458, La. App.

A board of examiners, in allowing a teacher credit for two years' business service, exceeded its authority (Greater New York Charter, 1091). —Langdon v. Teachers' Retirement Board of City of New York, 238 N. Y. S. 642, 135 Misc. Report 271, order affirmed 235 N. Y. S. 827, 226 Appl. Div. 870, N. Y. Sup.

Pupils

An injunction against transferring a colored pupil from a school for white children to a colored school, on the sole ground that the distance was unreasonable, is held properly refused (Kans. revised statutes of 1923, §72—1724). — Wright v. Board of Education of City of Topeka, 284 Pacific reporter 363, Kans.

The legislature may authorize students residing in a district without a school of a particular class to attend such schools in neighboring district at the home district's expense, but not in disregard of the constitutional provisions (Tex. constitution art. 7, §1). — City of Dallas v. Love, 23 Southwestern reporter (2d), 431, Tex. Civ. App.

A statute requiring a person having the control of children between the ages of 8 and 17 to require them to attend a public or a private school, or to receive instruction by a competent person, is held valid (S. Dak. revised code of 1919, §7642, subds. 1, 3 (b), as amended by the laws of 1921, c. 199;

S. Dak. constitution, U. S. amendment 14, §1). — State v. Williams, 228 Northwestern reporter 470, S. Dak.

LAW AND LEGISLATION

—A battle between two school boards, one elective and the other appointive, was recently settled by the courts at Prairie du Chien, Wis. The issue arose over the appointment of a superintendent. The elective board appointed B. J. Kennedy, high-school principal, as superintendent. A controversy arose whereupon the city council ousted the elective board and replaced the same with an appointive board. The latter appointed A. O. Eagen as superintendent. Ouster proceedings were then instituted by the appointive board. The court decided in favor of the elective board and assessed the costs against the plaintiffs. The elective board consists of W. D. Carroll, Thomas Neugent, and Mrs. Frank Haupt.

—The teacher tenure act of California has been upheld by the ruling of Superior Judge Wastover in the case of Mrs. Lillian Morris against the Pasadena board of education. The court granted Mrs. Morris a writ of mandamus to compel the board to assign her as a permanent teacher and to give her back pay amounting to \$8,525. Mrs. Morris' claim was based on the fact that in 1925, after two years' employment, she was informed that she was not a permanent teacher, contrary to the provisions of the Teachers Tenure Act.

—Compulsory vaccination in private schools has been defeated in the Massachusetts state senate. By a vote of 23 to 5, the senate referred the matter to the next annual session. Mr. N. P. Sowle, a senator from New Bedford, in opposing the vaccination measure, declared that the state had gone far enough under the existing law. The present law requires vaccination in public schools. Favorable discussion on the bill was given by Mr. W. C. Daggett, a senator from Somerville, chairman of the public health committee, which had recommended it.

THE SYRACUSE SALARY DECISION

The supreme court of New York state, in a decision rendered on March 21, has made a ruling up-

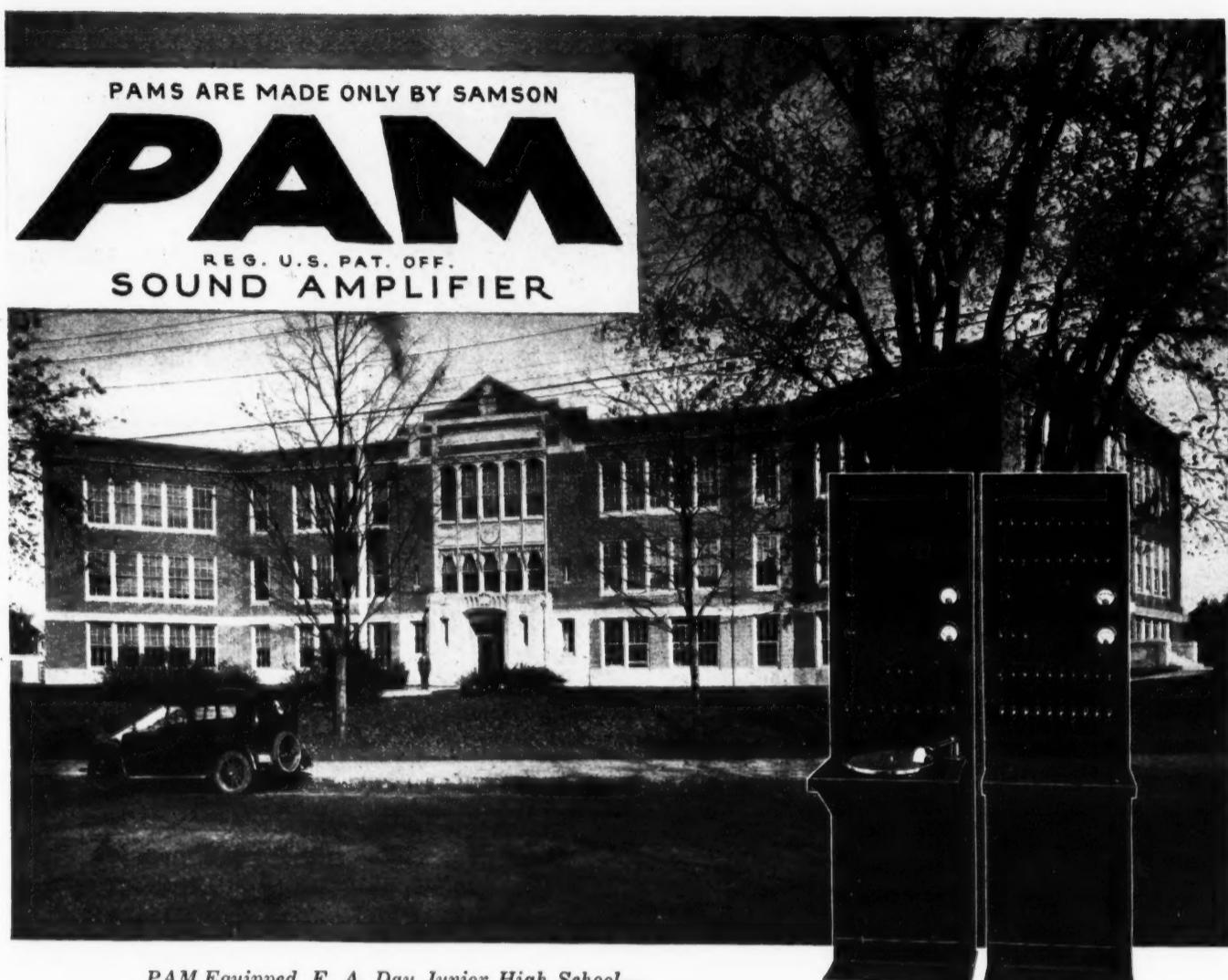
holding the board of education of Syracuse in the school-salaries controversy with the local board of estimate and apportionment. In its decision, the court pointed out that broad powers given boards of education of the state by the education laws of 1917 have tied the hands of the cities of the state so far as control over educational funds is concerned.

As a result of this decision, the salaries of four employees in the administrative offices of the board of education, together with increases granted December 10, 1929, were ordered paid immediately. Four school officials, Mr. T. M. Townsend, assistant superintendent in charge of business affairs, Mr. Ernest Cleland, assistant, Miss Lois Maxon, secretary to the superintendent, and Mr. John J. McKinstry, supervising janitor, had received no salaries this year.

An unallocated salary item of \$1,500 was cut out of the 1930 budget by the board of estimate and apportionment, and although there was no salary item in the budget to allow for increases to these employees, the school board voted increases. The board of estimate subsequently refused to sanction the salaries of those over \$1,900, and the comptroller refused to audit the salaries of the four employees in question.

In the case, the argument for the estimate board was based on the fact that the school board was given the salaries asked for in the budget, and that the salary item of \$1,500 was unallocated. The opinion which decides a controversial question between the school board and the board of estimate is in accord with other decisions handed down since 1917. In no instance has a city been awarded a verdict over a board of education where the expenditures of school boards have been questioned.

—During the school year 1928-29, 314,100 physical defects were treated among school children of New York state, exclusive of those in New York City, Buffalo, and Rochester. This is an increase of 22,053 over the preceding year. It makes a total of 1,433,703 cases which received attention under the state system of school medical inspection during the past five years.



PAM Equipped, F. A. Day Junior High School—
Newtonville, Mass.

PMR40

PAM, the new faculty member

With a PAM school amplifying system important lectures, talks, educational radio programs or phonograph records can be reproduced for the pupils in any or all rooms simultaneously.

THIS system is one which has been designed from information as to educational needs supplied us in a national survey by school boards, superintendents, principals and teachers. It is not a system adapted from other systems to partially fill the wants of the school.

The lecturer can be in the principal's office, the school auditorium or at any point properly connected with the amplifier system, and his voice is instantly brought to the pupils and teachers.

The distribution of reproduction in the PAM system is at the finger tips of the operator. Volume of the programme is both visual and aural, assuring the correct level in each room. Whether one loud speaker or all are in service, no variation in volume is experienced.

The PAM system is also a group address equipment for the auditorium, allowing the weaker-voiced to be heard distinctly. It may serve as an accompaniment to motion pictures or entertainments.

The PAM school amplifying system also distributes music for setting-up exercises, luncheon, dancing, gymnastic instructions, and the school's social functions.

The finest recordings on phonograph records of music, drama, elocution and language are made available for any or all classes by a PAM school amplifier system.

PAM equipment operates from the electric light socket, entirely eliminating batteries and their attendant care. It is made in accordance with Underwriters' requirements.

The PAM amplifier system is made by the manufacturer of Samson fire alarm and telegraph systems, which have been used in schools for the last thirty-five or forty years.

Our new bulletin ASBJ1 "PAM, The New Voice in Education" describes the position of radio programs in school curricula and other uses of PAM school equipment and installations. Write on your letterhead and we will send it promptly.

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A FIVE YEAR SURVEY — of New York schools

(1924-29)

By William J. O'Shea, Superintendent of Schools in New York City, showed 71 new schools opened, 70 of these FERALUN equipped.

The New York Times commenting editorially on the report (reproduced herewith) stresses the necessity of "unceasing inspection and constant repair."

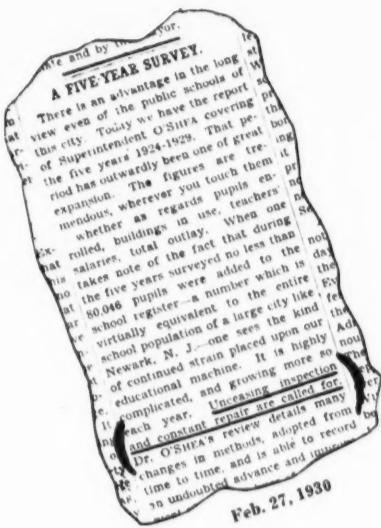
Of all places requiring "unceasing inspection and constant repair" in a school building the stairs are of especial importance and unless properly equipped with a safe and durable tread are the cause of most of the trouble.

FERALUN anti-slip treads have been used in several hundred public schools in New York City during the past eighteen years and during that entire period it has not been necessary to expend any money for repairs or upkeep.

Make your repairs with FERALUN treads and no further repairs will be necessary.

Write for complete information

AMERICAN ABRASIVE METALS COMPANY
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WASHINGTON CORRESPONDENCE

A. C. Monahan, Formerly U. S. Bureau of Education

NATIONAL COMMITTEE ON THE GEORGE WASHINGTON BICENTENNIAL

The year 1932 is to be observed in Washington, D. C., with a series of celebrations noting the passage of 200 years since the birth of George Washington. Many of these celebrations will be conducted under the auspices of educational organizations and institutions. A number of important educational conventions will be held in the city during that year, and educational institutions in Washington will take a prominent part in many of the outstanding features of the general observances. Schools and colleges throughout the country will be asked to hold celebrations according to plans outlined in Washington. Some of these will be simultaneous with the Washington programs so that the radio may be used.

Several committees are at work on programs in which the schools will be interested. Up until now these committees have worked almost independently of each other. Realizing this the U. S. Commissioner of Education, Dr. William John Cooper, called together a committee of educators from Washington and the nearest states, to serve as a central committee for all who desire to prepare programs in which the schools will be asked to take part. The committee met and organized and made tentative plans for the work. Its early work was getting in touch with the various groups with which it will come in contact in the future. The members of the committee are:

J. W. Crabtree, Secretary of the National Education Association; S. D. Shankland, Secretary of the Department of Superintendence; J. E. Morgan, Editor of the N.E.A. Journal; Harris Hunt, state superintendent of public instruction, Virginia; W. S. Cook, state superintendent of public instruction, West Virginia; A. S. Cook, state superintendent of public instruction, Maryland; H. V. Halloway, state

superintendent of public instruction, Delaware; C. H. Elliott, state commissioner of education, New Jersey; J. A. H. Keith, state commissioner of education, Pennsylvania; Frank W. Ballou, superintendent of schools, Washington; D. A. Weglein, superintendent of schools, Baltimore; Edwin C. Broome, superintendent of schools, Philadelphia.

Also on the committee is President C. H. Marvin, of George Washington University, representing the Federal Schoolmen's Club. This is an organization of 125 men in the District of Columbia and immediate vicinity, in educational work of national or local type.

School Auditorium Construction

Valuable information relative to school-auditorium construction, particularly in regard to their acoustics, is contained in a new circular, just issued by the United States Bureau of Standards, giving the results of several years of study of this question.

The usual defects of the school auditorium from the standpoint of its acoustics are echo, dead spots, and reverberation. Echo and reverberation are serious defects, since the prolongation of one sound, such as a musical note or a spoken syllable, may interfere with the next sound, producing hopeless confusion. This is likewise a difficult defect to remove, and should be prevented by foresight in construction. Whenever possible, the architect should avoid circular halls and smooth, hard-finished walls. Surfaces, such as the ceiling and even the proscenium arch in theaters, should be broken up into irregular areas to scatter the reflected sound.

Dead spots and sound foci, which result as a consequence of reverberation-producing conditions, may be treated in the same way. Balconies require special treatment; where low and deep they are almost certain to be unsatisfactory.

A certain amount of reverberation does not last long enough to interfere with the next succeeding sound. A table of acceptable limits of reverberation time for rooms of different volumes, with formulas for calculating the reverberation time, are given. Values are also given for the sound-absorbing powers of different materials, as compared with

an open window, which constitutes an almost perfect absorber.

Practical general directions for designing an auditorium are included in the circular which points out that rooms of certain sizes are best for specific purposes. Thus, a theater should be of moderate size, while an auditorium for musical purposes may be much larger. In case an orchestra is reinforced by an organ, due allowance must be made, or the organ may drown out the other instruments. Great care should be used in selecting the interior finish so as to reduce the reverberation time to a proper value. There should be no difficulty in selecting suitable trimmings, since sound-absorbing materials of many commercial kinds are available.

Educational Exhibit, Office of Education

The United States Office of Education has received a valuable education exhibit as a gift from Mrs. Theodore Andrae, of Milwaukee. It consists of a frieze illustrating the history of communication throughout the ages, grouped in three sections entitled "Yesterday, Today, and Tomorrow." There are elaborate panels of the hemispheres by James Dougherty, and a large revolving globe of the earth showing the lines of communication. It is the major part of an exhibit made at the World Federation of Education Association in Geneva last August, and is known as the Andrae World Interdependence Exhibit, which was directed by Miss Elizabeth Watson of New York.

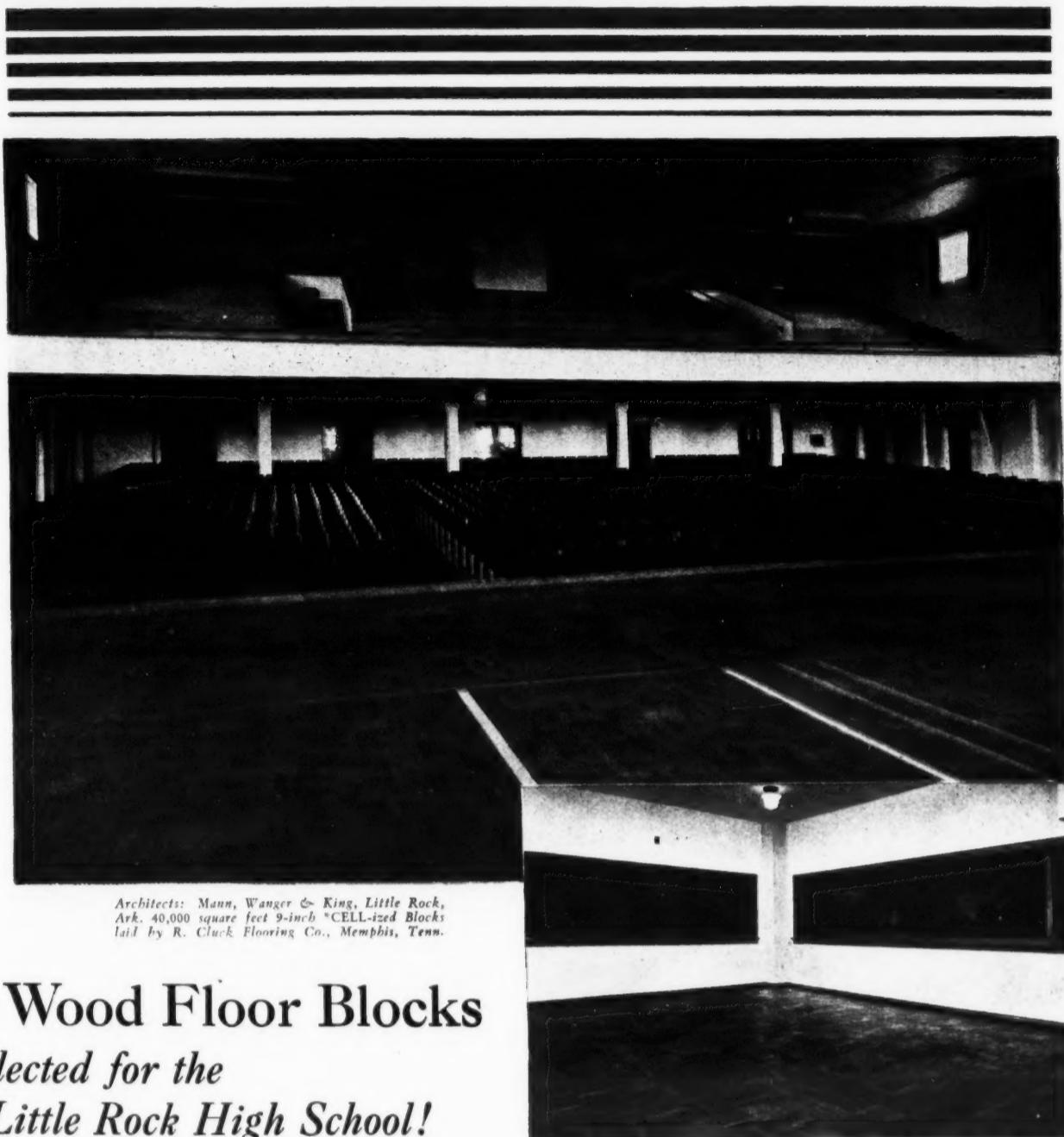
As soon as the present federal building makes space available, the exhibit will be given a prominent place in the Office of Education in the Interior Building. It will be open to the public and is expected to be one of the points of interest to visitors to Washington, and particularly to those interested in planning school exhibits.

Congressional School Economy for the District of Columbia

The annual appropriation bill for the schools of Washington, passed by the House of Representatives, omits the salaries of 78 kindergarten teachers in the present system. This is in accordance with the recommendation of a member of Congress, who

(Concluded on Page 88)

Each block is a complete square or rectangular unit of three or more flooring strips, in oak, walnut, maple, beech, light and dark Philippine mahogany, yellow pine, either beveled or square edge, 6 $\frac{3}{4}$ " to 12" squares, 13/16" thickness, all grades. Rectangle sizes 6"x12", 6 $\frac{3}{4}$ "x13 $\frac{1}{2}$ ". *CELLized by a chemical treat, to reduce the tendency to change in size. Insect and decay resistant.



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SCHOOL construction experts agree that perhaps in no other type of structure is a floor expected to meet so many exacting requirements as in a modern school. It should first of all be durable, yet comfortable, neither too hard or too soft, sustaining constant heavy use, with ease and noislessness under foot. It should be reasonably inexpensive in both original and upkeep cost. It should also display beauty of a type which develops the aesthetic appreciation of school children.

*CELLized Wood Floor Blocks combine these advantages to a degree not

enjoyed by any other floor material. They will not wear out, yet are comfortable under foot and quiet. The floor is sound deadening, as the blocks are laid directly over concrete in EVERBOND, a plastic cement which provides a resilient base not possible with ordinary wood floors. The unit block is rapidly laid.

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Front and back of 6 $\frac{3}{4}$ " block

*CELLized wood floor blocks are guaranteed by *CELLized Oak Flooring Inc. Laid only by Licensed Flooring Contractors. The names of those licensed to use this label in your locality will be supplied upon request



*CELLized planks and strip flooring are obtainable through licensees of *CELLized Oak Flooring Inc.

THE CHAMBERLIN-VANDERBILT HOTEL CHOSE HARTSHORN WINDOW SHADES FOR 432 WINDOWS!

The Chamberlin-Vanderbilt, at Old Point Comfort, Virginia, is an all-year tourist hotel that selected its equipment on the basis of continuously satisfying service. The window shades—432 of them—are of Hartshorn Shade Cloth—spun, woven and finished by Stewart Hartshorn and are mounted on Hartshorn Rollers.

STEWART HARTSHORN COMPANY
250 Fifth Avenue, New York City



SHADE ROLLERS AND
WINDOW SHADE CLOTH



(Concluded from Page 86)

proposed a plan of economy. His plan in general, is to have each kindergarten conduct two daily sessions, one in the forenoon and the other in the afternoon. They would be attended by different sets of children, but taught by the same teacher. This, he said, would make necessary only one half as many kindergarten teachers as at present. Washington's kindergartens are already conducted on the one-session plan. The proposed plan would be the same, as far as the children are concerned, except that the daily session would be shorter by about one hour. For the teachers it would be a two-session plan, with two different sets of children, and it would increase their hours of actual classroom work by about two hours a day.

The 78 teachers released from kindergarten work would be retained in the school system as first-grade teachers, to fill vacancies occurring through retirement and promotion in the regular course of events. It would mean an actual decrease in the teaching staff of 78.

The board of education which hesitated to take action on the proposal, were forced to do so by the District congress of parent-teacher association, which objected to the congressional proposal, and after taking up the matter with the various school parent-teacher associations and citizens' associations asked for a hearing before the board. After the hearing the congress of parent-teacher associations asked the board to order Dr. Frank W. Ballou, superintendent of schools, to appear before the Senate subcommittee on appropriations and insist on the restoration of the funds for the present 78 teachers. The board voted on the question of whether or not a special subcommittee should be sent, Dr. Ballou to be a member of that committee. A tie vote resulted; seven members of the board were present, six voting. The chairman refused to vote and break the tie. The board will take no action, leaving the Senate committee to make its own decision. Representatives of the congress of parent-teacher associations and the citizens' associations, will appear, however, before the Senate committee and urge the restoration of the 78 teachers eliminated by the bill.

Education by Radio

B. H. Darrow, supervisor of radio education for the Ohio State Department of Education is in charge of the most advanced use of the radio in schoolwork in the country, the Ohio plan, which has been in operation for two years. A one-hour program is broadcasted from Columbus every school day. The majority of schools in the state have receiving sets. The program is carefully arranged to supplement the regular school-teaching program.

Eight state departments of education are now giving regular programs for the same purpose as the Ohio broadcasting. Six other state departments broadcast at irregular periods, but the programs are primarily for adults and those interested in the school development in the states, and are not intended as a part of the school-teaching program.

Approximately 75 colleges and universities in the United States have broadcasting systems, from which educational programs are sent at regularly advertised periods. These are used in the "extension service" of these institutions. An additional 80 colleges use commercial stations for the same purposes, having no stations of their own.

The National Advisory Committee on Education by Radio has prepared a brief set of rules for those who are called upon to give educational programs on the radio. They are: "Write out your exact wording, begin with one or two short, striking statements. Present your subject on the level of 13-year-old listeners. Use a few pertinent historical illustrations. Anecdotes, short, and clearly to the point, are good. Avoid too much generalization. Minimize preaching and advice. Revise your manuscript for clearness and delivery. Reread aloud several times under the watch. Speak distinctly into the microphone. Do not change your position while speaking."

Student Communists in Washington High Schools

For several months the District of Columbia has been disturbed by the activities of communistic propaganda, distributed in the public high schools, supposedly by the Young Pioneers of America, a student-communist organization. Rumors of such

activities have been current in the city. Several high-school pupils, making "soap box" addresses on the streets in the downtown section, have been arrested for blocking the traffic or on other technical charges.

Citizens' associations have taken up the matter and are demanding a thorough investigation by the school board. At a recent meeting of the school board an official of the mid-citizens' association presented evidence that communistic propaganda is active in the schools. Two high-school boys from different schools were brought before the board to testify that they had received printed circulars, presumably communistic propaganda. The board has the matter under serious consideration.

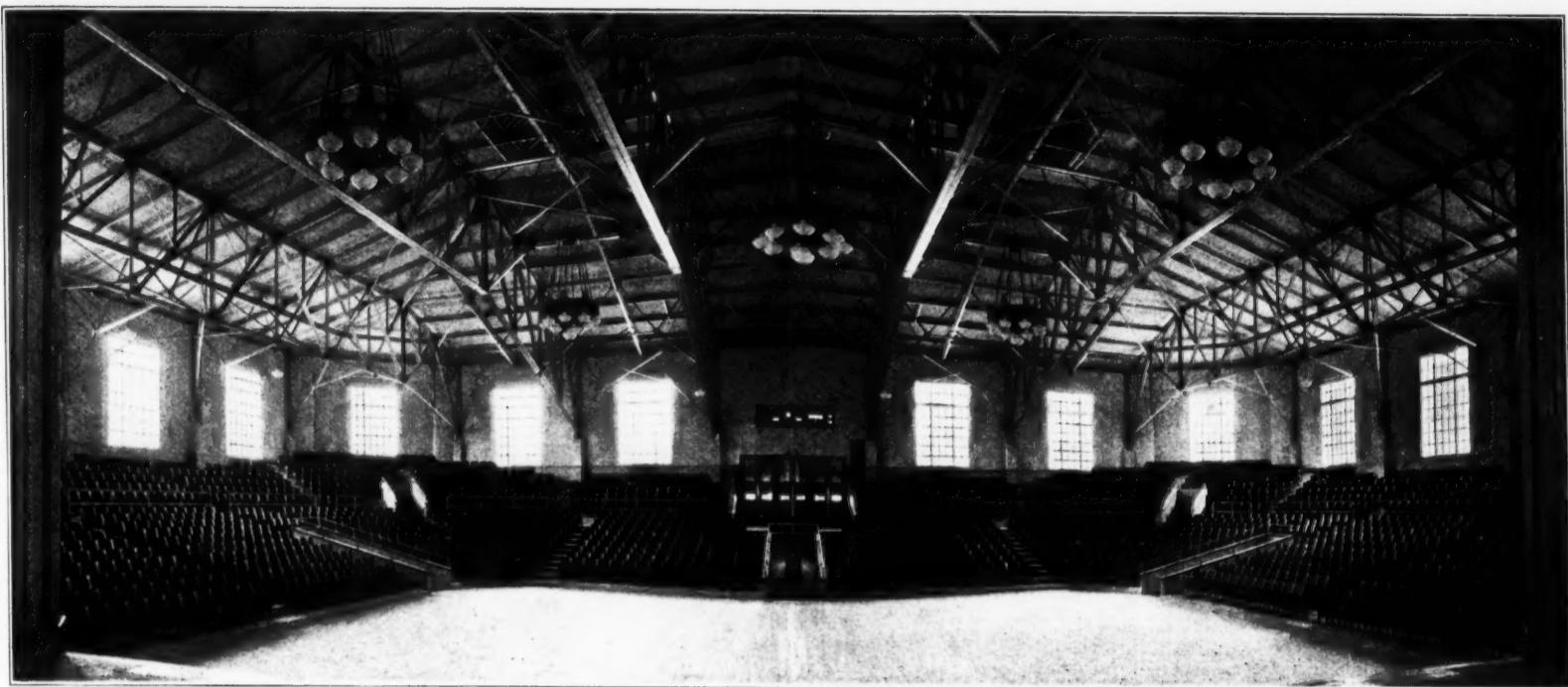
One circular, called the "Red Cadet," distributed in mimeographed form, threatens a school strike on May Day, and reads as follows: "Fellow Cadets and Students: We guess you are wondering why this bulletin is issued and who issues it. A well-organized and systematic propaganda campaign is being conducted by the school authorities, directed by the War Department. The military organizations in the high schools are a part of the gigantic preparations for the coming war. . . . The Young Communist League of America is the only youth organization fighting these sinister war preparations. We shall expose the militaristic propaganda of Wall Street and show the true nature of it. We students and cadets must realize that we must not fight our own brothers whether it be in England, Latin America, China, the Soviet Union, or right here in the United States. . . .

"We are sure to be successful in our expose of the lying propaganda in the schools. We are confident that all intelligent high-school students and cadets will help The Red Cadet by distributing, discussing, and writing articles for it.

—Bakersfield, Calif. The voters have approved a bond issue of \$50,000 for a grammar school in the Horace Mann School District.

—Hastings, Nebr. A new graded school will be erected, at a cost of \$125,000.

—McCook, Nebr., is planning the erection of a graded school, at a cost of \$75,000.



The Oakland High School, Oakland, California, obtained better acoustics by applying type "B" Acousti-Celotex to the ceilings. Acousti-Celotex is the only acoustical material that can be stenciled and painted without loss of acoustical value.

No noisy reverberations nor jumbled words in *this* auditorium

Here ceilings of Acousti-Celotex make every word clearly audible to every listener

IT'S always a pleasure to listen to lectures and school entertainments in the auditorium of the Oakland High School.

For in this beautiful auditorium musical notes are never blurred . . . listeners never have to strain to catch the words of speakers.

The reason is simple. Acousti-Celotex, applied to the ceilings, *quiets noise and eliminates distorting reverberations.*

Hundreds of schools have solved their acoustical problems with Acousti-Celotex.



Many use it, too, to absorb classroom noise . . . to quiet the racket in corridors, manual training shops, gymnasiums.

Acousti-Celotex is a noise-absorbing cane fibre tile that comes in single, finished units which are quickly applied to the ceilings in old or new buildings. It is the only acoustical material that can

be painted and repainted, even with lead and oil paints, without impairing its sound-absorbing efficiency.

Let us explain how this remarkable material will improve study conditions in *your* school. Mail the coupon below. The services of our engineers are available to help you solve your acoustical problems.

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Please send me your interesting new folder, "Better Study Conditions in Schools."

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This phase of construction is a specialist's job. The fire prevention engineers of The Home Insurance Company will gladly co-operate with you and your architects

in planning new buildings so as to make them as fire resistive as possible.

It is often possible to make minor changes in present buildings so that they too will be entitled to a lower rate of insurance and will afford greater security to the investment involved and to the lives of the children entrusted to your care.

The service of these engineers is free and can be obtained through the local agent for The Home or by writing direct to the company at 59 Maiden Lane, New York City.

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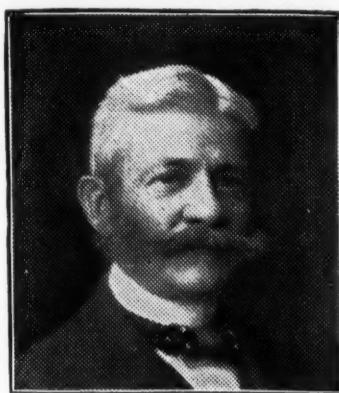
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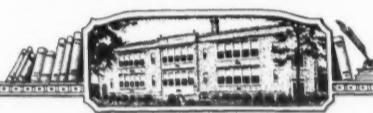
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Prompt Service on large or small orders.

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Superintendents

DR. CHADSEY PASSES ON

DR. CHARLES E. CHADSEY, dean of the University of Illinois College of Education, died suddenly at his home in Urbana, on April 9. Dr. Chadsey had been ill two days of heart trouble.

Dr. Chadsey was born in Nebraska in October, 1870, and received his education in the schools of that state. He attended Stanford University, graduating in the class of 1892, and in 1894 he attended Columbia University, receiving the degree of Ph.D. in 1897. He also held degrees from the University of Denver and the Michigan State Teachers' College.

From the principalship of a school in Durango, Colo., in 1894, Dr. Chadsey went to the superintendency, a position he held until 1900. He served as superintendent of the North Side schools of Denver from 1900 to 1903, as assistant superintendent from 1903 to 1907, and as superintendent from 1907 to 1912. In 1912 he went to the superintendency at Detroit, a position in which he made a splendid record of achievement.

Dr. Chadsey became a storm center in March, 1919, when he went to Chicago as superintendent of schools, at a salary of \$18,000. He fell into a maelstrom of badly mixed politics and his administrative career was short. He was stripped of his administrative powers and reduced to a mere titular head of the schools through the action of the majority faction on the school board. His resignation as superintendent was presented at a special session of the school board, and he accepted a position in the school of education at the University of Illinois, where he has since remained.

Dr. Chadsey was active in the work of the Na-

tional Education Association and was president of the association in 1912.

PERSONAL NEWS OF SUPERINTENDENTS

—MR. JOHN DALRYMPLE has been elected superintendent of schools at Farmington, Mich.

—MR. R. L. CONLEY, of Halls, Tenn., has been elected superintendent of schools at Ridgely.

—MR. THAD. KNAPP, of Highland Park, Mich., has been elected superintendent of schools at Northville.

—SUPT. J. GROTHAM, of Ottumwa, Iowa, has been reelected for another year, with a substantial increase in salary.

—MR. W. E. ANDREWS, of Buffalo, Minn., has been elected superintendent of schools at Lake City. Mr. Andrews succeeds C. R. Martin, who has resigned after three years of service.

—MR. KARL C. SMITH, of Williamsburg, Iowa, has been elected superintendent of schools at West Liberty. He succeeds P. K. Cesander.

—SUPT. W. G. ROBERTSON, of Columbus Junction, Iowa, has been reelected for a sixth consecutive term.

—SUPT. M. O. LOKENSGAARD, of Kenyon, Minn., has been reelected for his eighth consecutive term.

—SUPT. S. A. SANDVEN, of Linn Grove, Iowa, has been reelected for the third time.

—MR. J. G. RAGSDALE, formerly principal of the high school at Butte, Mont., has been elected superintendent of schools. He succeeds A. H. Douglass.

—SUPT. L. C. HUNT, of Burlington, Vt., has been reelected for the school year, beginning July 1.

—SUPT. J. T. WEBB, of Union City, Tenn., has been reelected for the next school year.

—SUPT. F. E. CONVERSE, of Beloit, Wis., has been reelected for the next year.

—MR. J. K. WATT, of Coyville, Kans., has been elected principal of the high school at Peru.

—SUPT. F. L. MAHANNAH, of Cedar Falls, Iowa, has been reelected for a three-year term.

—SUPT. C. W. CRUIKSHANK, of Mt. Pleasant, Iowa, has been reelected for the next year.

—MR. HOMER DAVIS has been elected superintendent of schools at Okanogan, Wash.

—SUPT. P. S. DYER, of New Richland, Minn., has been reelected for the next year.

—SUPT. S. E. TIIFT, of Litchfield, Minn., has been reelected for the next year.

—DR. M. D. COLLINS, superintendent of schools of Campbell county, Ga., has become a candidate for the office of state school superintendent on the Democratic ticket.

—SUPT. H. E. NORTHEY, of Keosauqua, Iowa, has been reelected for another year.

—MR. CLYDE CAMPBELL, of Fayetteville, N. C., has been elected superintendent of schools at Newton.

—MR. H. W. GODFREY, of Olivia, Minn., has been elected superintendent of schools at Waseca.

—MR. L. E. CLAYTON has been elected superintendent of schools at Early, Iowa, to succeed Melvin Anderson, who has gone to Rolfe.

—MR. O. P. CALDWELL, formerly principal of the high school at Erie, Kans., has been elected superintendent of schools. He succeeds James M. Nation, who resigned from the service.

—SUPT. E. E. SWANSON, of Humboldt, Iowa, has been reelected for another year.

—MR. C. E. TOOLE, superintendent of schools at Pottsville, Pa., will retire at the close of the school year in June.

—SUPT. J. N. CUNNINGHAM, of Carroll, Iowa, has been reelected for another two-year term.

—SUPT. H. A. ELLIS, of Colfax, Wash., has been reelected for a one-year term.

—SUPT. M. C. LEFLER, of Lincoln, Nebr., has been reelected for a new three-year term. Mr. Lefler is completing a ten-year term which began in October, 1920.

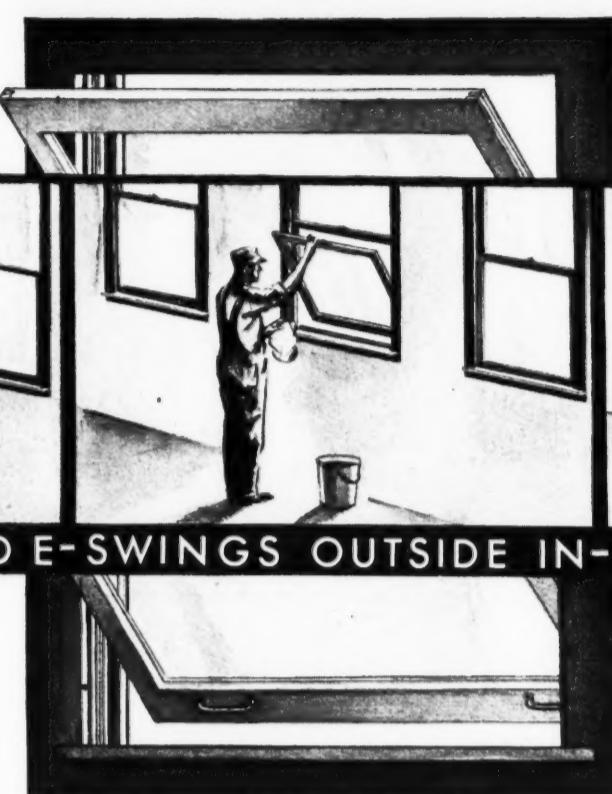
—MR. G. S. SANDERS, of Mangum, Okla., has been elected superintendent of schools at Roosevelt. Mr. Sanders was superintendent at Lake Creek for two years.

CLEAN BOTH SIDES FROM THE INSIDE

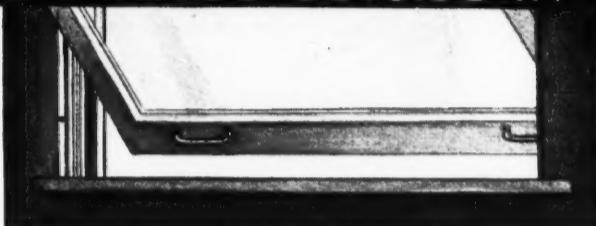
For Economy



CLEANS INSIDE-SWINGS OUTSIDE IN-CLEANS OUTSIDE



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The safest, easiest, and by far the most economical way to clean windows is from the *inside*. And Williams Equipped Windows, with both top and bottom sash completely reversible, make this better method possible.

Numerous schools in which Williams Reversible Windows have been installed, have reduced their cleaning costs from 30 to 50%.

WILLIAMS REVERSIBLE WINDOW EQUIPMENT

Clean Your Windows from the Inside

Williams Equipped Windows which are ideally adapted for use in schools, can be tilted to any desired angle to insure a plentiful supply of fresh air without drafts. Illustrated catalog will be gladly furnished on request.

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For 26 years manufacturers and installers of
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—MRS. CHLOE B. JONES, a pioneer educator of California, died at her home in Sierra Madre on March 12, at the age of 87. Mrs. Jones came to Sierra Madre in 1877. She was the first woman superintendent of schools in Los Angeles, holding that position from 1880 to 1881.

—SUPT. F. C. BRAY, of Fort Atkinson, Wis., has been reelected for a tenth consecutive school year.

—MR. W. R. PAULSON, of Froid, Mont., has been elected superintendent of schools at Fairmount, N. Dak.

—SUPT. EMIL ESTENSON, of Buhl, Minn., has been reelected for another year.

—MR. A. C. BAUMGARTNER, of Henderson, Iowa, has been elected superintendent of schools at Wilton, to succeed Miss Maude Felter.

—MR. DONALD KITCH has been reelected for another year as head of the schools at St. Johns, Kans.

—SUPT. CHARLES THOMPSON, of Brown City, Mich., has been reelected for another year, with an increase in salary.

—SUPT. R. L. STONE, of Cass Lake, Minn., has been reelected for another year, with an increase in salary.

—MR. L. D. HIGHTOWER, formerly principal of the high school at Salida, Colo., has been elected superintendent of schools, to succeed C. E. Tanton.

—MR. W. L. ARMSTRONG, of Shubert, Nebr., has been elected superintendent of schools at Plymouth.

—SUPT. W. E. CONKLE, of Medina, Ohio, has been reelected for a new three-year term.

—SUPT. J. E. BURKE, of Boston, Mass., has been reelected for a new six-year term, beginning with September 1. Asst. SUPT. M. J. DOWNEY was also unanimously reelected for a six-year term.

—SUPT. J. M. IRELAND, of Tabor, Iowa, has been reelected for a term of years. Mr. Ireland has completed fourteen years of service in the schools.

—A testimonial dinner in tribute to ASSOCIATE SUPT. EDWARD MANDEL, of New York City, was given at the Hotel Paramount. About 80 of Mr.

Mandel's former teachers, several principals, and assistant principals attended the dinner which was given as a tribute to Mr. Mandel's service to the city schools and their teachers during his long connection with the school system.

—SUPT. D. B. HELLER, of Eveleth, Minn., has been reelected, with a large increase in salary. Mr. Heller has completed seven years of service at Eveleth.

—PRINCIPAL O. M. CORBELL, of the Centralia Township High School, Centralia, Ill., has been reelected for a two-year term, with an increase in salary.

—On March 14, the associates, former students, and other friends of PAUL HENRY HANUS, professor of history and the art of teaching, emeritus, met at the Commodore Hotel, in Cambridge, Mass., to honor him on his 75th birthday. A gift representing the good will and respect of a widespread group who have studied under Professor Hanus was presented.

—MR. WORTH McCCLURE, who has been elected superintendent of schools of Seattle, Wash., to succeed T. R. Cole, has had seventeen years' experience in the Seattle schools. Mr. McClure entered the Seattle schools in 1913 as principal of the Youngstown School. Later he was transferred to the Gatewood School, from which position he was promoted to the assistant superintendency in 1923. Mr. McClure enters upon his new work on August 1, after completing a year's service as professor of elementary administration at Teachers' College, Buffalo, N. Y.

—SUPT. K. C. SMITH, of West Liberty, Iowa, has been reelected for the next school year.

—MR. HAL ANDERSON, of Millington, Tenn., has been elected superintendent of schools at Corinth, Miss.

—MR. L. S. HARBO, of Parker's Prairie, Minn., has been elected superintendent of schools at Osakis, to succeed E. N. Hamilton.

—MR. W. I. THAMES, of Hattiesburg, Miss., has been reelected for another year.

—MR. P. B. WOODS, of Russell, Iowa, has been elected superintendent of schools at Thayer.

—MR. E. V. HEACOCK, of Danbury, Iowa, has been elected superintendent of schools at Pierson, to succeed A. O. Voogd.

—MR. J. J. PINKERTON, of Cane Hill, Ark., has been elected superintendent of schools at Winslow.

—MR. C. M. RIDGLEY, superintendent of schools of Logan, Ohio, died at his home on April 1, following an attack of heart failure.

—MR. J. A. REYNOLDS, of Centerville, Ind., has been elected superintendent of schools at Economy, to succeed R. G. Hern.

—SUPT. J. W. FOREMAN, of Goshen, Ind., has been reelected for a three-year term.

—MR. C. F. DIENST, of Boise, Idaho, has been reelected as superintendent of schools for the year 1930.

—SUPT. E. L. BOLTON, of Concrete, Wash., has been reelected for the next school year.

—SUPT. E. J. McNAMARA, of Longview, Wash., has been reelected for the next year. MR. CLARENCE ZIMMERMAN, high-school principal, was reelected for two years.

—MR. JOHN W. GODDARD, of Cheney, Wash., has been elected superintendent of schools at Centralia.

—MR. E. M. SPENCER of Colo, Iowa, has been elected superintendent of schools at Dunlap.

—MR. C. J. DAUNER, of Emporia, Kans., has been elected superintendent of schools at Wamego.

—MR. I. L. PLUMMER, of Oakes, N. Dak., has been reelected for another year.

—SUPT. JAMES C. BAY, of Easton, Pa., has been reelected for a new four-year term, beginning with July 1.

—SUPT. W. F. SHIRLEY, of Marshalltown, Iowa, has been reelected for a new three-year term, beginning with July 1.

(Concluded on Page 94)

SOMETHING NEW ABOUT LIGHT

*illustrating the connection between eyesight and
BALANCED LIGHTING*

THE old idea of regarding light as something vague and indefinite cost too much in eye-strain and in nervous energy.

School executives are now recognizing the fact that light can be considered as a

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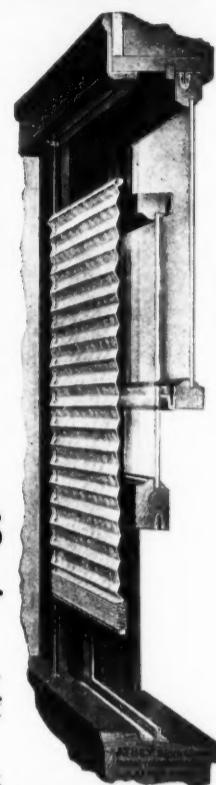
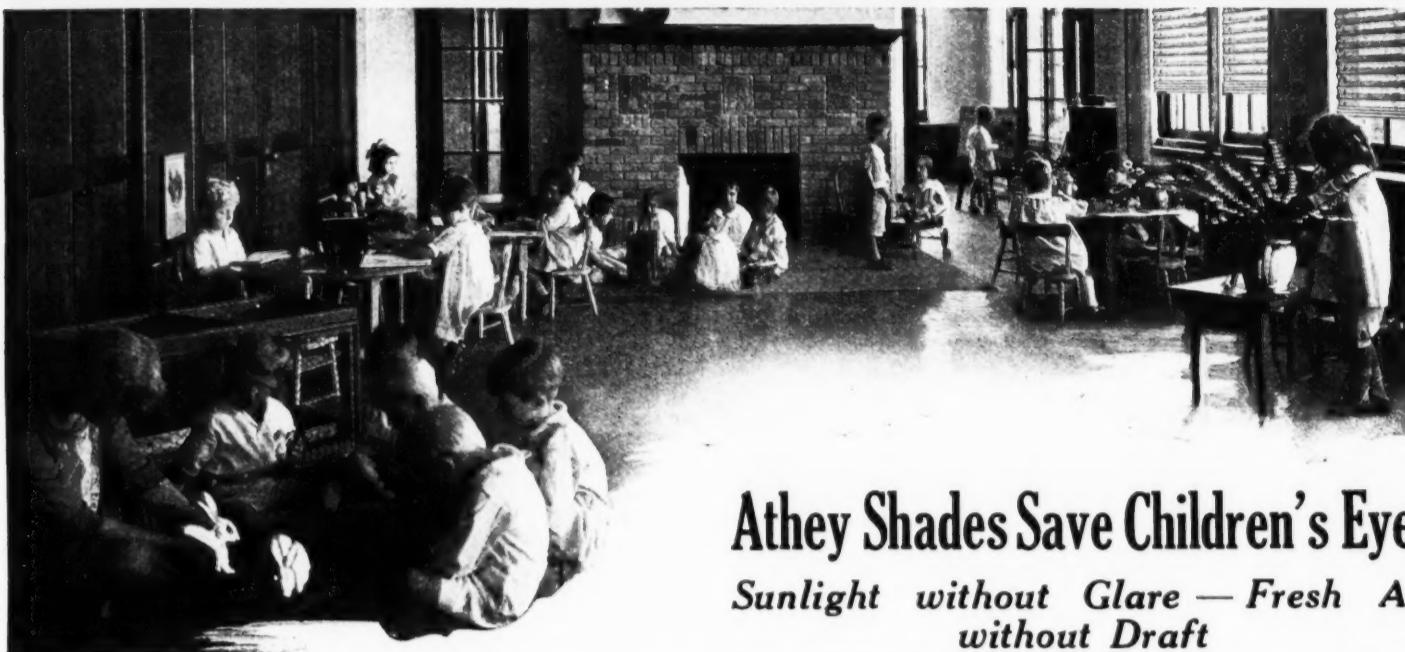


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Vernilion, Ohio.
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Boston, Mass.
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University of Illinois, Urbana, Ill.
Woodrow Wilson School,
Long Beach, Calif.
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ATHEY SHADES are ideal for the Schoolroom. They have demonstrated their effectiveness in hundreds of the finest schools in every State in the Union.

Preservation of eyesight is one of the most important reasons for the demand for ATHEY SHADES in the school building. Details of specifications, as outlined by the Bureau of Education, are met in practically every item by the operation and material of the ATHEY SHADE. They are instantly adjustable to shade any part of the windows whether they be steel or wood, ordinary sash, casement, or of the tilting type. The edges are eyeleted and slide on taut guide wires which hold the shade from the window or from flapping out the window to become soiled and torn. Opaque shades specially fitted to make room light-proof for motion pictures. The material is a special weave of coutil which resists dust and dirt, very strong and durable, and is easily cleaned in case of necessity.

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Representatives in all Principal Cities
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(Concluded from Page 92)

—MR. F. H. GILLILAND, of Sibley, Iowa, has been elected superintendent of schools at Devils Lake, N. Dak.

—MR. S. E. SMITH has resigned as head of the high school at St. Helena, Oreg.

—SUPT. C. S. WARREN, of Lenoir City, N. C., has been reelected for a new term of five years.

—SUPT. W. A. PYE, of Toledo, Iowa, has been reelected for a two-year term.

—SUPT. D. O. CONNOR, of Dexter City, Ohio, has been given a life high-school certificate in recognition of his standing and efficiency as a school administrator. Supt. Conner is a graduate of Ohio University and holds an A.B. degree.

—MR. E. D. CLINE, formerly assistant superintendent of schools at South Bend, Ind., has been elected superintendent of schools at Dubuque. Mr. Cline who takes up his new work in September, is a graduate of Drake University and holds a master of arts degree given by the University of Iowa.

—MR. DECARIS REEVES has been elected superintendent of schools at Vancouver, Wash. Mr. Reeves succeeds C. W. Shumway, who has resigned.

—MRS. MYRTLE R. DAVIS, state superintendent of public instruction of Idaho, has announced her candidacy for re-election to the superintendency.

—MR. J. H. GRAVES has resigned as superintendent of the union high school at Monterey, Calif.

—MR. J. C. STIERS, of Washington, Pa., has resigned from the superintendency and has accepted a position with a textbook publishing company.

—SUPT. S. E. TIFT, of Litchfield, Minn., has been reelected for the next school year.

—SUPT. P. O. HANSON, of Hallock, Minn., has been reelected for a fourth consecutive term.

—SUPT. F. P. BUCK, of St. Johns, Mich., has been reelected for another year. Mr. Buck has completed eighteen years of service in the St. Johns schools.

—MR. HAROLD McCORMICK, of Kalamazoo, Mich., has been elected superintendent of schools at Nashville, to succeed J. L. Prescott.

—SUPT. D. B. HELLER, of Eveleth, Minn., has been reelected for another year.

—SUPT. E. F. BIRCKHEAD, of Winchester, Ky., has been reelected for a term of two years.

—SUPT. C. L. IEHL, of Oto, Iowa, has been reelected for a sixth term.

—SUPT. B. J. BRANNAN, of Sanderson, Tex., has been reelected for a third term. Mr. Brannan is completing the eighth year of his superintendency.

—MR. JOHN C. STIERS, superintendent of schools at Washington, Pa., resigned on April 1, after twelve years of service.

—SUPT. W. H. HILL, of Perry, Okla., has been reelected for the next year.

—MR. L. C. CALDWELL, superintendent of schools of Boyd county, Okla., has been appointed as a member of the new state textbook commission created by the last state legislature.

—MR. W. R. DAVIS, of Sullivan, Ind., has been elected superintendent of schools at Utica, Mich., to succeed R. C. Lunger.

—MISS MABEL C. BRAGG, assistant superintendent of schools of Newton, Mass., under Supt. W. G. Wheeler since 1915, will resign on June 1, to become a member of the faculty of Boston University.

—MR. L. E. BEAR, superintendent of schools at Mineral Point, Wis., has announced his resignation, after completing six years of service in the local schools.

—SUPT. E. E. OBERHOLTZER, of Houston, Tex., has been reelected for a seventh consecutive term, with a substantial increase in salary. During the administration of Mr. Oberholtzer, the board has expended \$11,000,000 for new buildings and additions to schools, the 5-3-3 plan has been adopted, the school curriculum has been revised, lunch-rooms have been installed in nearly 100 buildings, and teachers' salaries have been increased.

—SUPT. L. C. WARD, of Fort Wayne, Ind., has been given a new three-year contract and a substantial increase in salary.

—SUPT. R. D. BARR, of Jefferson, Iowa, has announced his resignation, in order to become manager of a teachers' agency in Omaha, Nebr.

—ERNEST E. COLE, first assistant superintendent of the Chicago schools for several years up to 1923, has filed mandamus proceedings to restore him to his former position. He claims that he was removed in violation of the Otis law. He is now the principal of the Eugene Field school.

—MR. W. B. GOE has been reelected as superintendent of schools at Bardall, Okla. MR. J. R. STAIB has been reelected as principal of the high school.

—SUPT. CLAYTON L. JAMES, of Pulaski, Tenn., has been reelected for the school year 1930.

—SUPT. V. W. LACKEY, of Midland, Tex., has been reelected for another year. Mr. Lackey has just completed 24 years of consecutive service in the Midland schools.

—SUPT. E. L. MORRIS, of Marquette, Iowa, has been reelected for another year. Mr. Morris has completed six years as head of the school system.

—SUPT. L. J. BELT, of Wheatland, Wyo., has been reelected for another year, at an increased salary. Mr. Belt has completed his sixth year at Wheatland.

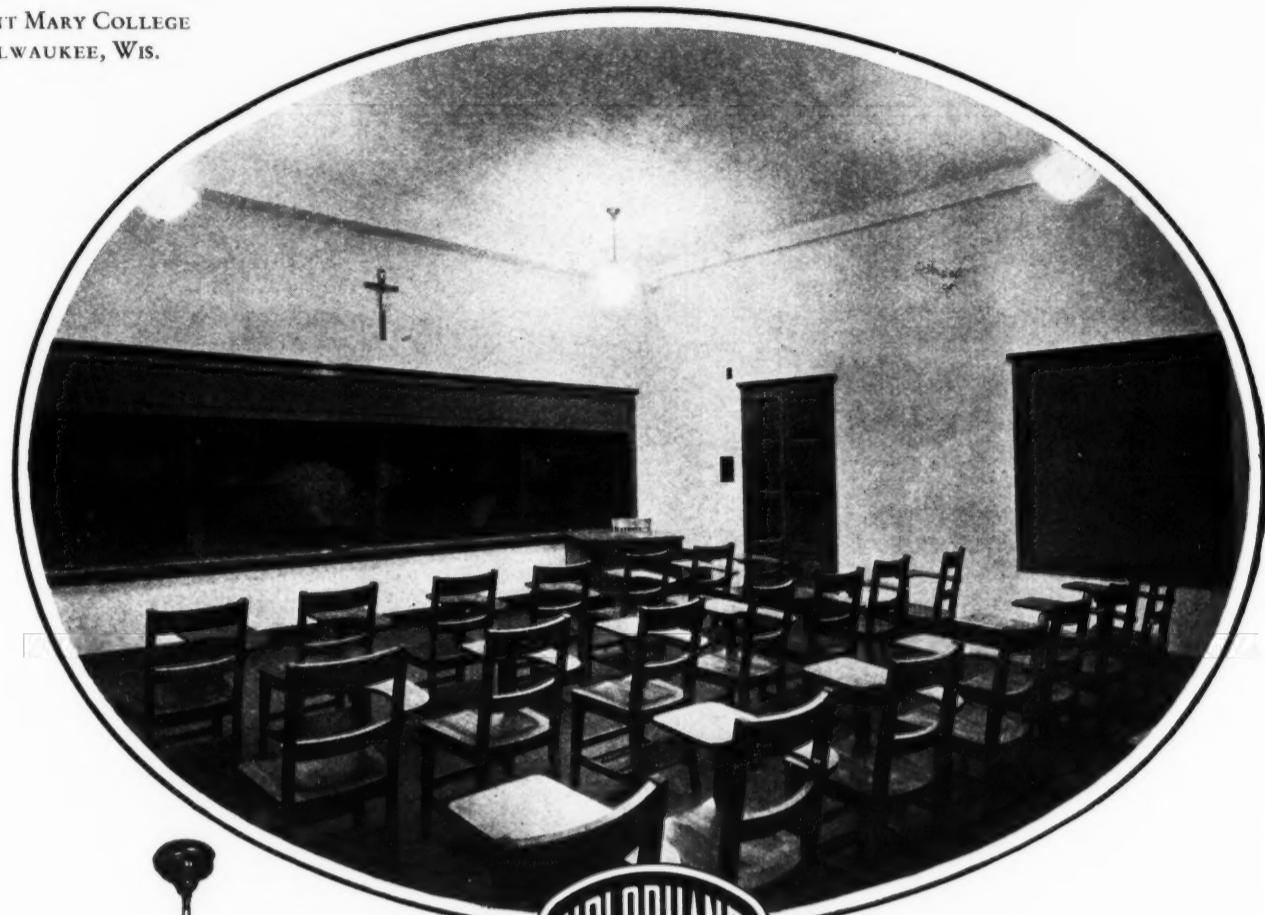
—GEORGE E. DE WOLF was reelected superintendent at Creston, Iowa. The *Creston Advertiser* says: "Mr. De Wolfe has proved an expert organizer, a keen administrative officer, an exceptional educator, and a wise executive."

—SUPT. L. E. BEAR, of Mineral Point, Wis., has resigned.

—SUPT. J. J. PHILLIPS, of Lancaster, Ohio, has been reelected for a new term of four years. Supt. Phillips has been head of the local school system for the past eight years, coming to Lancaster from Galion.

—SUPT. CHARLES W. BICKFORD, of Lewiston, Me., has been reelected as head of the schools, at an increased salary.

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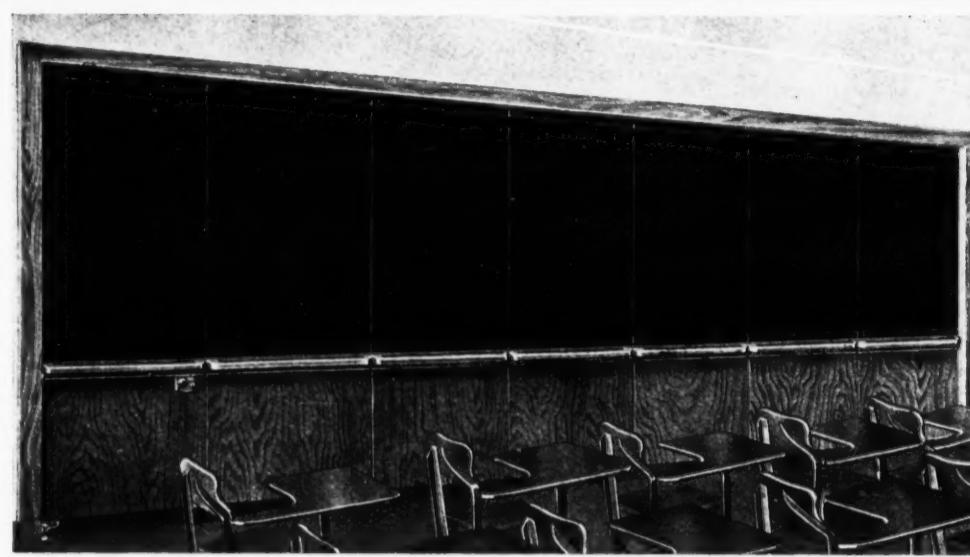
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WRITE FOR BOOKLET NO. 344A

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Poorly ventilated, "smelly" cloakrooms are out-of-date. The new standard for school room equipment demands the modern Prose-Maco Wardrobe... for health's sake... for protection of clothing... convenience and architectural beauty. Look at the illustration of a seven-door Prose-Maco Wardrobe... closed, locked. And the master door is the only one

that needs a key... because of the single control multiple operation principle. The doors open back to back, the wide openings between revealing inside, shelves and hooks to provide for even a large crowded room. The Prose-Maco is the ideal solution of the wrap storage problem.

Write for the explanatory catalog

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New
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TEACHERS' SALARIES

THE NEW BRECKENRIDGE SALARY SCHEDULE

The school board of Breckenridge, Texas, has adopted a salary schedule, prepared by Supt. N. S. Holland. The schedule includes all teachers in the elementary, junior high, and senior high schools and is effective for the school year 1930-31.

The purpose of the schedule is to adjust and equalize salaries. Under the schedule, it is arranged that each staff member must be assigned to his or her particular group before a contract is made. Any teacher may, however, transfer from one group to another on the salary schedule at any time. In the application of the schedule, no increase in salary may exceed \$5 per month in the elementary schools. Department heads in elementary schools will be allowed not to exceed \$10 per month for special service, while junior and senior high schools will be allowed not more than \$5 per month.

The schedule is as follows:

	Salary Schedule		
	Elementary School	Junior High School	Senior High School
Less than 2 yrs. college education	\$110	\$125	\$135
2 to 4 yrs. college education	115	130	140
Degree	120	135	145
Degree and 6 weeks' graduate work	140	150	

THE STEVENS POINT SALARY SCHEDULE

The school board of Stevens Point, Wis., has adopted a new salary schedule for teachers and principals. Under the rules, a teacher to be eligible for appointment must be a graduate of a Wisconsin normal school or equivalent, and must hold a B.A. degree, or its equivalent, from a college, university, or normal school, and possess a license or certificate from the state education department. Except in an emergency, all local applicants for teaching posi-

tions must have had at least one year of successful experience. No teacher will receive a reduction in present salary on account of the new schedule. Credit for teaching in other schools is allowed by the board of education.

All teachers are required to earn at least four semester credits in an approved normal, college, or university at least once in four years. Teachers who are beginning their teaching in the city schools, and who have not earned four credits through summer-school attendance since graduation, must earn such credits by summer-school attendance following their second year of service. Travel of an educational nature, or other study, will be accepted in lieu of summer-school attendance upon the recommendation of the superintendent of schools.

Teachers whose work does not warrant an increase in salary will be so notified. At the discretion of the board of education, they may be retained for one year at the same or less salary. Regardless of training, no teacher will be permitted to go into a higher class in the schedule, unless his work is entirely satisfactory.

Salaries will be based upon a school year of 38 weeks and will be paid in twelve equal installments at the end of each school month, and at the end of June, July, and August.

In the operation of the schedule, no teacher may receive an increase for the first year in excess of \$100, except for an unusual reason. In going from one class to another, the board may allow credit for one half a year's work. Credits will be determined at the time the contracts are issued, and credits earned between that date and the following September will not apply until the next year. In going from one class to another, teachers will advance into the next highest step.

Teachers in Class D, with two years of training, will begin at a minimum salary of \$1,000, and will advance at the rate of \$50 during the second, third, and fourth years, and \$25 during the fifth and sixth years.

Teachers in Class C, with three years of training, will begin at a minimum of \$1,050, and will advance at the rate of \$50 during the second, third,

fourth, fifth, and sixth years, and \$25 during the seventh and eighth years.

Teachers in Class B, with four years of training, will begin at a minimum of \$1,100, and will advance at the rate of \$75 during the second and third years, \$50 during the fourth, fifth, and sixth years, and \$25 during the seventh and eighth years.

Teachers in Class A, with five years of training, will begin at a minimum of \$1,150, and will advance at the rate of \$75 during the second, third, and fourth years, and \$50 during the fifth, sixth, seventh, and eighth years.

Men teachers, with four years of training, will begin at a minimum of \$1,700, and will receive increases of \$100 during the second, third, fourth, fifth, sixth, and seventh years.

Grade principals, in addition to placement in the group, will receive \$35 for each class in their building. Teachers in the high school will be given \$200 additional. The salaries of the superintendent, the high-school principal, and the supervisors and special teachers will be fixed separately.

NEW HASBROUCK HEIGHTS SALARY SCHEDULE

A new single-salary schedule, prepared by Mr. C. C. Hitchcock, supervising principal of the schools, has been adopted by the school board of Hasbrouck Heights, N. J. The schedule, which includes all teachers from the kindergarten through the high school, is based upon the experience and number of years of training, regardless of the grade or subject taught. The schedule goes into effect in September, 1930.

In the adoption of the schedule, the purpose has been to retain teachers for a longer tenure. In retaining such teachers, it is the purpose to have them continue their training to a reasonable extent. All courses taken by teachers must be approved by the supervising principal, and there must be evident consistency in the courses. The schedule recognizes the equal importance of all grades in the school system; it discourages teachers from trying for promotion to higher grades; and it allows teachers

(Continued on Page 98)

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NIAGARA is handsome...rich in colorings; translucent; fine and smooth in finish.

NIAGARA is washable...really washable...repeatedly washable. It absorbs no dirt, and hence retains none. A non-alkaline suds quickly restores its original beauty.

NIAGARA is splendidly made...even and clear in texture. No pains have been spared to make it altogether fine.

NIAGARA is durable...it will not stretch nor "go dead" with long exposure to the sun. Its washability feature affords unusual benefits, because the fabric itself is so long-lived.

NIAGARA is economical...its first cost is moderate. Its unprecedented long service spares replacements at wider intervals than they have ever been before.

Don't judge the shades you're going to buy by those you used to buy. Expect more for your money than you've ever had. And get more with NIAGARA. We shall gladly arrange for you to see NIAGARA.

The New Speedy Model "D"

HILD FLOOR MACHINE

A HILD FEATURE

The new Hild Safety Switch



This new Hild Safety Switch is the safest and most convenient switch ever offered to the user of electric floor scrubbing, polishing and waxing machines.

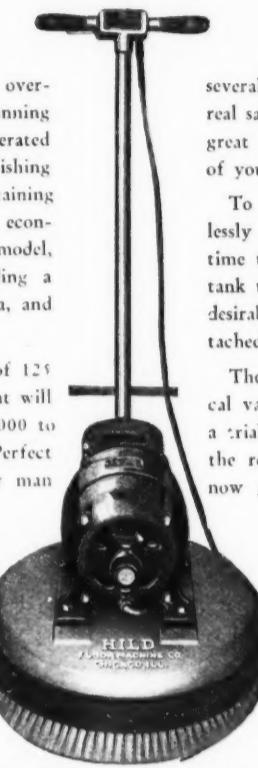
No longer can any damage or accident occur as a result of the operator forgetting to shut off the switch should a fuse be blown or the end of a rubber cord pulled out of a lamp socket or base plug. The operator starts the machine by a slight pressure of the thumb or index finger against the hinged lever located underneath the rubber grip on the right handle bar.

The Safety Switch on the Hild Floor Machine is water proof and dust proof. Its simple construction makes it fool proof and it will not get out of order.

Model "D" is the newest and largest of the Hild Floor Machines. No detail has been overlooked to make this quiet running machine the best electrically operated floor scrubbing, waxing and polishing machine on the market, maintaining at the same time, an exceptional economy of price. Besides this model, there are three others, providing a correct size for every floor area, and all moderately priced.

Model "D" exerts a pressure of 12½ pounds on an 18-inch brush that will easily scrub, wax and polish 3,000 to 5,000 square feet an hour. Perfect balance makes its operation by man or woman an easy matter.

This machine is particularly suited to school use, where floors should be kept shining at all times. By means of the Hild, the floors can be cleaned oftener and better.



ter by one person, thus eliminating the expense of several scrubwomen. This means a real saving in labor costs, as well as a great improvement in the appearance of your floors.

To scrub floors of all kinds spotlessly clean in the shortest possible time the use of the Hild 3½ gallon tank to hold the soap and water is a desirable convenience. It can be attached to the handle of the machine.

The best way to prove the practical value of the "Hild" is to give it a trial on your own floors. Compare the results with the results you are now getting. See for yourself how much of a saving it means to you. Watch the machine operate and see how efficiently and economically it enhances the appearance of your floors. Write for our free trial offer at once.

Hild Floor Machine Co.

108 West Lake Street

CHICAGO, ILL.

(Continued from Page 96)

to specialize in their chosen grade, to remain in this grade, and to be rewarded with as high a salary as any other teacher.

The schedule has been worked out on the basis of half-year intervals in teacher training. On the half-year plan there will be a higher cost to the board of education in the operation of the schedule, but it is believed that more teachers will begin advanced study under this plan.

Under the schedule, teachers with two years of training will begin at a minimum of \$1,400 per year, and will receive annual increments of \$50, up to a maximum of \$2,000 in the ninth year of service.

Teachers with two and one-half years of training will begin at a minimum of \$1,450, and will receive annual increments of \$75, up to a maximum of \$2,500 in the tenth year of service.

Teachers with three years of training will begin at a minimum of \$1,500, and will receive annual increments of \$100, up to a maximum of \$2,500 in the tenth year of service.

Teachers with three and one-half years of training will begin at a minimum of \$1,550, and will receive annual increments of \$125, up to a maximum of \$2,600 in the tenth year of service.

Teachers with four years of training will begin at a minimum of \$1,600, and will receive annual increments of \$150, up to a maximum of \$3,000 in the tenth year of service.

Teachers with four and one-half years of training will begin at a minimum of \$1,650, and will receive annual increments of \$150, up to a maximum of \$3,250 in the tenth year of service.

Teachers with five years of training will begin at a minimum of \$1,700, and will receive annual increments of \$150, up to a maximum of \$3,500 in the tenth year of service.

The figures in the schedule have been arrived at as a result of a study of both the cost of living and competition with neighboring communities. The minimum of \$1,400 was decided upon as practically twice the cost of board and room in Hasbrouck Heights. The \$3,500 maximum compares favorably with the majority of surrounding

communities. This maximum is \$1,000 more than the previous one enjoyed by the teachers.

THE CORRY, PA., SALARY SCHEDULE

The school board has adopted the recommendations of Supt. R. S. Dewey and the instruction committee, providing for increases in salary according to certain definite standards which have been set up. In the preparation of the schedule, such items as state laws, state average salaries, living conditions, supply and demand in different positions, and schedules of surrounding districts were taken into consideration. The schedule is as follows:

Elementary teachers will begin at a minimum of \$1,000 and will advance by increases of \$100, up to a maximum of \$1,400. Elementary principals will begin at a minimum of \$1,350, with an increase of \$25 per room over the salary as teacher.

Women teachers in the junior high school with two years' training will begin at a minimum of \$1,100, and will advance by increases of \$100, up to a maximum of \$1,400, and to a final maximum of \$1,500. Teachers with three years' training will begin at a minimum of \$1,200, and will advance at the rate of \$100 up to a maximum of \$1,500, and to a final maximum of \$1,600. Teachers with four years' training will begin at a minimum of \$1,300, and will advance at the rate of \$100, up to a maximum of \$1,600, and to a final maximum of \$1,700. Men teachers with three years' training will begin at a minimum of \$1,300, and will advance at the rate of \$100, up to a maximum of \$1,500, and to a final maximum of \$1,700.

Teachers with four years' training will begin at a minimum of \$1,300, and will advance at the rate of \$100, up to a maximum of \$1,600 and to a final maximum of \$1,800. Women teachers in the senior high school with three years' training will begin at a minimum of \$1,200, and will advance at the rate of \$100, up to a maximum of \$1,600, and to a final maximum of \$1,650. Teachers with four years' training will begin at a minimum of \$1,300, and will advance at the rate of \$100, up to a maximum of \$1,600, and to a final maximum of \$1,800. Men teachers

with three years' training will begin at a minimum of \$1,300, and will advance at the rate of \$100, up to a maximum of \$1,600, and to a final maximum of \$1,700. Men teachers with four years' training will begin at a minimum of \$1,400, and will advance at the rate of \$100, up to a maximum of \$1,700, and to a final maximum of \$2,000.

Teachers in the special classes will begin at a minimum of \$1,200, and will advance at the rate of \$100, up to a maximum of \$1,400, and to a final maximum of \$1,600.

Teachers of the industrial arts will begin at a minimum of \$1,600, and will advance at the rate of \$100, up to a maximum of \$2,000, and to a final maximum of \$2,300. The director of industrial arts will begin at a minimum of \$2,000, and will advance at the rate of \$100, up to a maximum of \$2,400, and to a final maximum of \$2,600. The director of vocational home economics will begin at a minimum of \$1,400, and will advance at the rate of \$100, up to a maximum of \$1,600, and to a final maximum of \$1,800. Supervisors of art, music, and health activities will begin at a minimum of \$1,400, and will advance at the rate of \$100, up to a maximum of \$1,700, and to a final maximum of \$2,000.

High-school principals will begin at a minimum of \$2,000, and will advance at the rate of \$125, up to a maximum of \$2,500, and to a final maximum of \$2,800.

NEW SCALE AT EVELETH

The school board of Eveleth, Minn., has adopted a new salary schedule, which offers a bonus for summer-school attendance each third year to those reaching the maximum salary. The scale also gives special consideration in initial salary rating to those with supervisory or administrative experience, and requires that teachers now employed must have a M.A. degree in order to be re-employed for the school year 1930-31. The rules provide that the board of education may adjust the salaries of married men devoting full time to college teaching. Such cases will be handled in-

(Continued on Page 101)

Keep flooring Costs down

**Johns-Manville Tile Flooring
provides a resilient floor
economical to clean and
low in first cost**

MORNING, noon, afternoon, the pound and scuffle of hundreds of lively feet punish the floors of school house corridors.

How can flooring costs be kept down?

The logical solution lies in the selection of a flooring—low in first cost—that will wear well. Johns-Manville Tile Flooring offers all these advantages and it is resilient, quiet and good looking besides.

This flooring is ideal for school buildings. Its even, slip-proof surface insures against accident to the children under your care.

Water and dampness which are unavoidably tracked in on rainy days have no effect on Johns-Manville Tile Flooring. In fact, this flooring will even withstand the corrosion and stain of ink, and ordinary acids or alkalis.

Easy to clean and maintain

Ordinary soap and water will clean J-M Tile Flooring. No special preparations are required. Maintenance costs are exceedingly low since years of wear actually improve the material's appearance. If some serious injury damages the floor, or if it is desired to extend it, repairs or additions can be made without showing a noticeable separating line between the floor as originally installed and the newly-laid section.

We welcome inquiries from school officials and at any time we will offer suggestions on flooring problems or make estimates without obligation on your part. May we send you a free copy of our book, "Johns-Manville Tile Flooring"?

Johns-Manville TILE FLOORING—TYPE A



Wherever a lecture hall or auditorium or other school room has poor acoustics the condition can be readily corrected, as has been done in many cases, by the use of Johns-Manville Acoustical Materials.

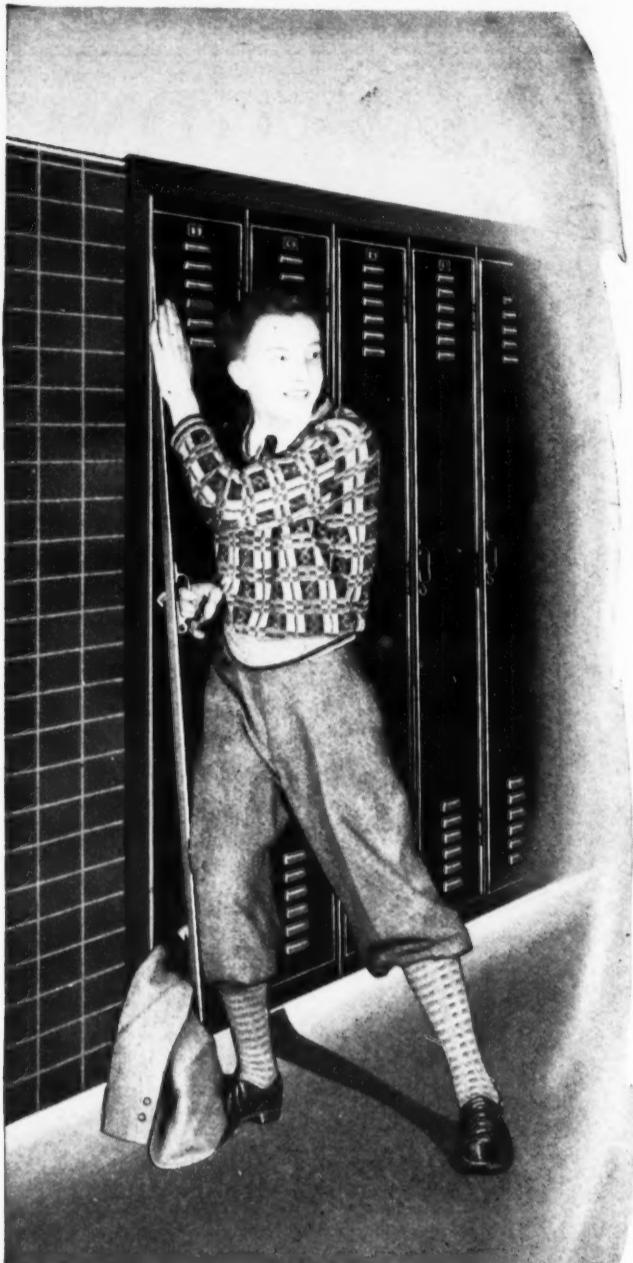


It is not necessary to run school flooring costs up into big figures. J-M Tile Flooring is low in first cost and in maintenance.

Address JOHNS-MANVILLE
At nearest office listed below
New York Chicago Cleveland
San Francisco Toronto
(Offices in all large cities)
Please send me a copy of your free book
"Johns-Manville Tile Flooring."

Name.....
TF-124-5
Address.....

Even in the principal's office, accidents will happen, but if the floor is J-M Tile Flooring ink will not stain it. In all corridors, halls, libraries, offices and the like, J-M Tile Flooring looks well and saves trouble and expense.



Of course you're interested in some of the schools where A-S-E lockers are now being used. The picture above shows a large installation of single Tier Lockers in the Shortridge High School, Indianapolis. The coupon will bring you complete details and many other photographs of outstanding installations. Mail it today.

GENTLEMEN:

Please send me the new catalog showing the complete line of A-S-E Steel Lockers and Cabinets.

Name

Address

City

State

in a hurry

In a hurry to catch up with the rest of the fellows—his mind full of baseball, basketball, swimming or maybe examinations—this youngster is doing a typically boyish stunt.

Some article of clothing, a shoe or part of his athletic equipment has fallen out at the bottom of the locker. And instead of investigating the trouble, he's forcing the door with his shoulder.

If it's an A-S-E locker no damage will be done. The door will spring back into perfect alignment as soon as the obstruction is removed.

For A-S-E *school* lockers are built to withstand the kind of abuse boys and girls are sure to give them.

The hinges are embossed in the door—completely concealed—and impossible to get at when the door is closed.

The three-point latch operates with one easy up and down movement. It is the simplest positive latch made with nothing to get out of order. Loose handles are positively eliminated.

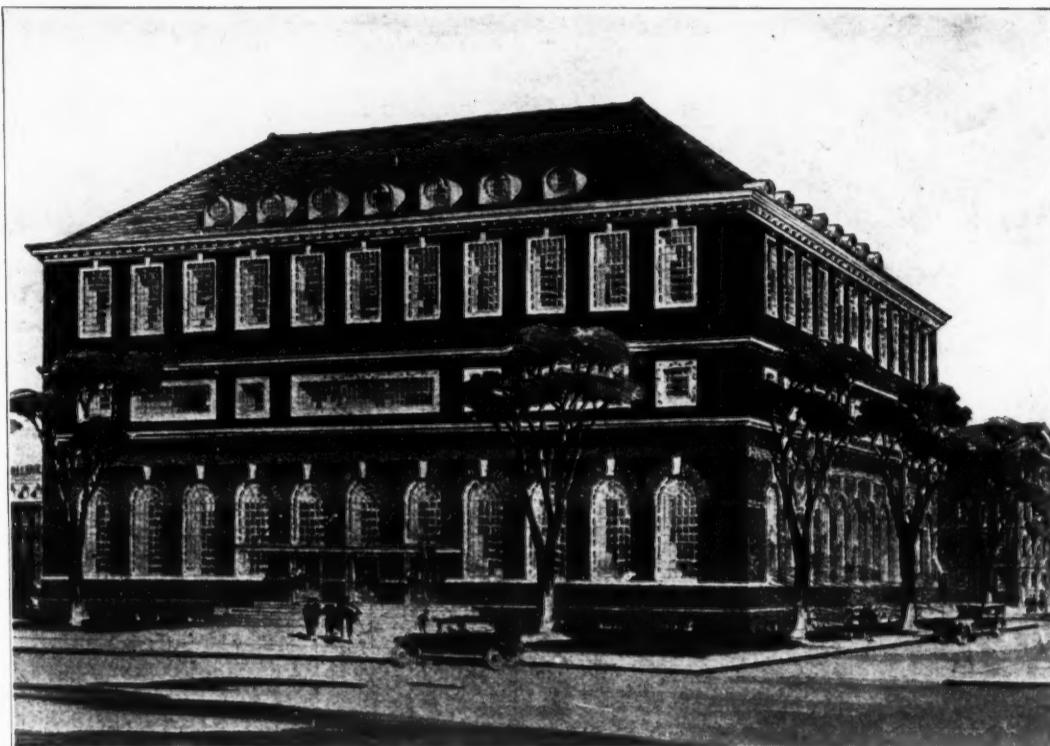
And the durable dark green baked enamel finish will not "scuff" off or crack.

ALL-STEEL-EQUIP COMPANY
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2,800 Dudley Combination Locks have just been installed in the new Harvard Indoor Athletic Building



New Harvard Indoor Athletic Building

DUDLEY LOCK CORPORATION

Dept. A-15

26 North Franklin Street
CHICAGO

Free sample Dudley Lock and full information sent to any school executive



given, up to \$2,525 for teachers without a degree, and \$2,700 for those with an A.B. degree. Supervisors who reach the maximum salary of \$2,700 will be given bonuses of \$75 every third year for approved summer-school attendance.

Physical-training teachers, working part time or full time, with college or high-school students, who hold degrees, will be given the same salary rating as high-school teachers. The maximum for teachers without degrees will be \$200 less than the regular high-school teachers. The initial salary is adjusted according to individual cases. Teachers with degrees are given bonuses for summer-school attendance on the same conditions as other teachers.

NEW ROCKFORD SALARY SCHEDULE FOR SUPERVISORS AND ELEMENTARY PRINCIPALS

The school board of Rockford, Ill., has adopted a salary schedule for principals and supervisors, prepared by Supt. Frank A. Jensen. The schedule takes into consideration the training and experience of these administrators, and allows credit for experience gained outside of Rockford. Under the schedule, a minimum of \$2,300 is paid to principals and supervisors without experience, where the training is equivalent to graduation from a four-year college course. An additional \$100 is paid for each 8 years of experience for administrators who have completed 60, 70, or 80 semester hours of training; 9 years for those with 90, 100, and 110 semester hours of training; 10 years for those with 120, 130, and 140 semester hours of training; and 11 years for those with 150, 160, 170, and 180 semester hours of training.

Principals and supervisors with experience outside of Rockford will count their first 2 years, and one half of all succeeding years of experience, to find their places on the schedule, but in no case will more than 5 years be so credited.

An additional \$50 will be added to the minimum salary for each one-third year of training (10 semester hours or equivalent) beyond teacher-

(Continued on Page 104)

(Continued from Page 98)
dividually and will be limited to those whose annual salaries are below \$2,500.

The new schedule does not permit the reduction of any salary for any of the present incumbents, but the annual advance will not be given to teachers who have completed the residence requirement, but who do not possess a M.A. degree, except on condition that they spend a minimum of six weeks in summer school, beginning with 1930. It contains special salaries for elementary, junior-high, senior-high, and junior-college teachers, and is based on the training and experience of teachers. Credit is allowed for teaching and experience gained outside of Eveleth. The schedule seeks to reward the teacher whose work has proved satisfactory, to give credit for loyalty and co-operation in schoolwork, and to make it possible for the teacher to advance himself or herself through advanced study in summer school, or a recognized teachers' college or other educational institution.

The Minima and Maxima

Under the schedule, men teachers in the junior college will be paid a minimum salary of \$1,900, with annual increments of \$75, up to a maximum of \$3,300. Women teachers will be paid a minimum of \$1,700, with annual increment of \$75, up to a maximum of \$3,100.

In the senior high school, men teachers will be paid a minimum of \$1,600, with annual increments of \$75, up to a maximum of \$2,800. Women teachers will be given a minimum of \$1,400, with annual increments of \$75, up to a maximum of \$2,600.

In the junior high school, men teachers will receive a minimum of \$1,600, with annual increments of \$75, up to a maximum of \$2,800. Women teachers will be paid a minimum of \$1,400, with annual increments of \$75, up to a maximum of \$2,600.

Teachers in the elementary schools will be given a minimum salary of \$1,100, with annual increments, up to a maximum of \$2,000 for two years' training, \$2,100 for three years' training, and \$2,200 for a degree. Teachers who reach the maximum salary of \$2,200 will be given bonuses of \$75 every third year, upon condition that they attend an approved summer school and present a minimum

of five semester credits in a field related to the individual's teaching program.

Elementary teachers in the special departments, such as teachers for deaf, open air, and retarded classes, will receive the same minimum as the regular elementary teachers, with annual increments of \$75, up to a maximum of \$2,050 for two years' training, \$2,150 for three years' training, and \$2,250 for a degree. Teachers who reach the maximum will be given bonuses for extra study the same as the regular elementary teachers.

Supervisors' Salaries

Department directors and heads receive no set minimum salary, but the salary is adjusted in individual cases by the board. Annual increments of \$75 will be paid, up to a maximum of \$3,500 for women and \$3,500 for men.

Elementary-school principals and grade supervisors are given salaries according to individual cases. Annual increments of \$75 are given, up to a maximum of \$2,525 for teachers without degrees, \$3,000 for men and women with the A.B. degree, and \$3,200 for men teachers. Teachers who reach the maximum salary, will be given bonuses of \$75 every third year for approved summer-school attendance.

Supervisors of special subjects are given no set minimum salary. Annual increments of \$75 are

USE OF LEISURE

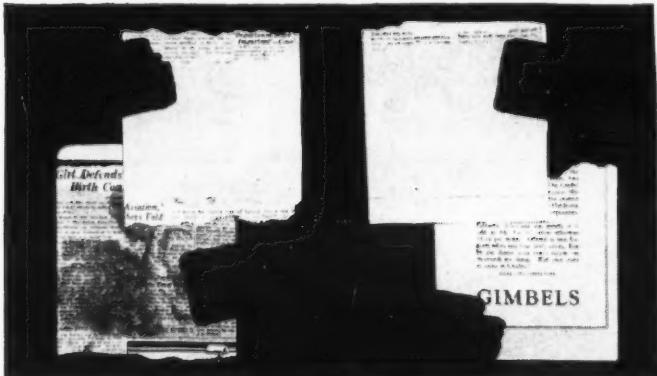
Leisure is the humane life-partner of work. In the last analysis, it heightens the pleasure of doing something that needs to be done. It is the good recess that breaks into labor too long pursued, as work itself is another recess to play too long indulged. It is only our false traditions and our psychological ignorance which make us act as though these statements were not true. An unbalanced psychological ration is as bad for the mind as an unbalanced diet is for the body.

—Henry Suzzallo

Faster Better Schools

NO long waits between coats! Six hours—that's all the time it takes Velumina Wallhide Undercoater to dry before applying the next coat. There's speed for you! And with better results, too, because paint chemists have finally beaten "spotting" and the ugly blemishes that painting over uncured or poor quality plaster inevitably caused—beaten them with Velumina Wallhide, the spot-stopping undercoater!

Even on porous newspaper (see unretouched illustration below) — even on moist, uncured plaster, this remarkable first coater *seals the surface* against lime, alkali and moisture spots. Stops the thirsty suction and uneven "draw" of un-uniform plaster and prevents suction spots.



The Newspaper Test

Proof of how Velumina Wallhide First Coater "holds itself out" — seals the porous surface of common newspaper without staining through!

**Velumina
Wall
First Coater and**

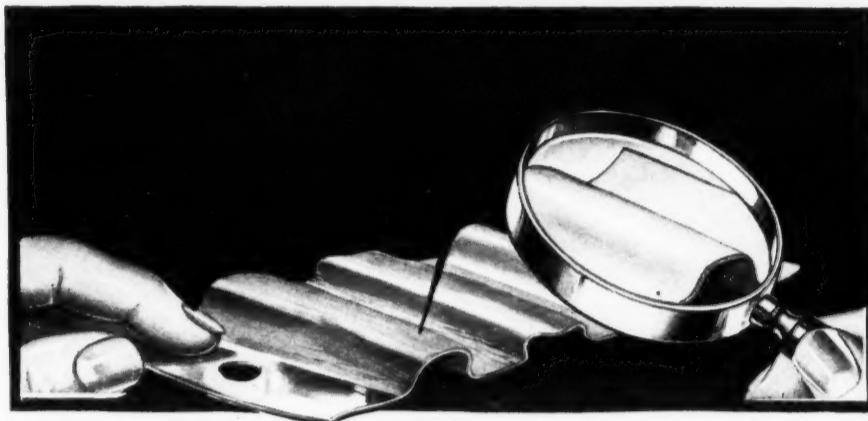


PITTSBURGH PLATE

Painting for

Lends great adhesiveness and elasticity to finishing material

Undercoated with Velumina Wallhide, even the most brittle enamels will not flake or crack. The "Tin Test" (illustrated) proves it!



ON any interior surface — plaster, wood, cement or brick and under any flat wall paint — specify Velumina Wallhide Undercoater. Not alone for its spot-stopping property but for the longer life and greater covering capacity it will give the finishing paint. Why? Because Velumina Wallhide *is* adhesive and elastic — and, what's more important—it lends these qualities to the final covering coat.

For the final coat use Velumina Wallhide Finishing Flat. In this way the surface is doubly protected, for Velumina Finishing Flat possesses all of the properties of the undercoater and prevents trouble from skips of first coater, or where little knobs of plaster have been knocked off.

Two Coats—quality job

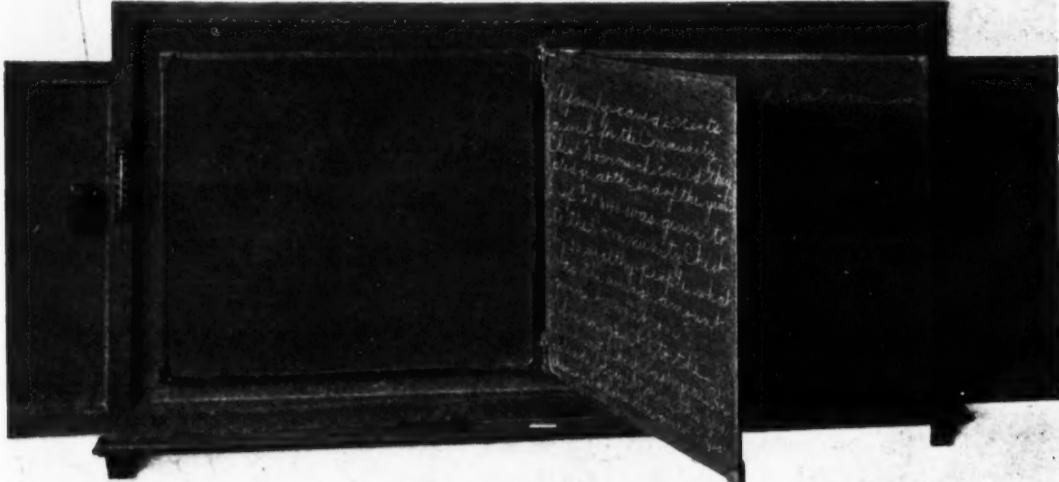
That's all — two coats — for a soft-toned beautiful quality result that is seldom obtained with three coats — and it is economical and long lasting because easy washing keeps it clean.

hide Finishing Flat

Write today for interesting booklet, "Velumina Wallhide — the Great Spot Stopper" for complete information about this great contribution to safe, economical school painting.

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Paint~Varnish~Lacquer Factories
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To Protect the eyes of Youth

It took parents a long time to find out the reason why Johnny and Sarah needed eye glasses at the age of 6 or 8. Educators find that 65% of America's School Children have defective vision. This is the result of glare . . . strain . . . faulty blackboard arrangement.

The Alternator is an easy remedy. By installing an Alternator at the front of the room you reduce eye-strain to a minimum. Light reflection is eliminated . . . the teacher is benefited too. For the Alternator is the modern schoolroom's most practical teaching aid. To know full details, write for the new catalog No. A-4.

K - M SUPPLY CO.

119-123 West Eighth St.

Kansas City, Missouri

(Concluded from Page 101)

SALARY SCHEDULE														
Training, Semester Hours, and Years														
Years of Service	Undergraduate Hours 120 Semester Hours							Graduate Hours						
	2	2½	2¾	3	3½	3¾	4	4½	4¾	5	5½	5¾	6	
Sem. Hrs.	60	70	80	90	100	110	120	130	140	150	160	170	180	
0	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	
1	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	
2	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	
3	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	
4	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	
5	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	
6	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	
7	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	
8	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	
9	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	
10				3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	
11						3400	3450	3500	3550	3600	3650	3700		
12								3650	3700	3750	3800			

Note: A semester hour represents one class hour per week for 18 weeks or 2 laboratory hours per week for 18 weeks.

SCHEDULE OF SALARIES ADOPTED AT ROCKFORD, ILLINOIS

college graduation, or the equivalent. Training will be recognized until a total of 4 years beyond the teachers' college is attained. All credit for training is cumulative, and salaries will be adjusted at the beginning of the first semester of each school year. Courses to be applied as credit on the salary schedule must be approved in advance by the superintendent. In estimating the amount of credit, only 120 hours of undergraduate credit will be allowed, and all above 120 hours will be known as graduate credit. Credit for travel will be given, provided the amount of the credit is worked out in advance and approved by the educational committee of the board.

The schedule provides for a number of exceptions: Principals and supervisors whose present salaries are below the schedule will be given increases not exceeding \$200 per year, until they

reach the schedule. Those with less than 120 semester hours' credit must attend an approved college or university, at least 6 weeks once in every 3 years, beginning with July, 1929. Those with 120 semester hours' credit must attend an approved college or university at least 6 weeks once every 5 years, beginning with July, 1929.

A teacher must have at least 5 years' teaching experience and a bachelor's degree in order to become eligible to appointment as a principal or supervisor.

TEACHERS' SALARIES

Ottumwa, Iowa. The school board has begun a survey of teachers' salaries in cities of the same population, which is to form the basis for a revised salary schedule. The grade teachers have asked for an increase in the maximum, with graduated in-

creases over a number of years from the minimum of \$1,166.

—Everett, Wash. Supt. R. E. Cook has presented a recommendation to the school board, asking for new maximum salaries of \$1,800, \$1,920, and \$2,100 for grade, junior high, and senior-high-school instructors. The new maximums would become effective at the close of the 1930-31 school year.

—Cleveland, Ohio. A new educational experiment, through which several outstanding schools of Cuyahoga county will become demonstration centers, has been announced by County Supt. E. J. Bryan. The first step in the experiment will be the selection of schools where emphasis will be placed on the teaching of English, French, mathematics, and other school subjects which belong to the county school curriculum.

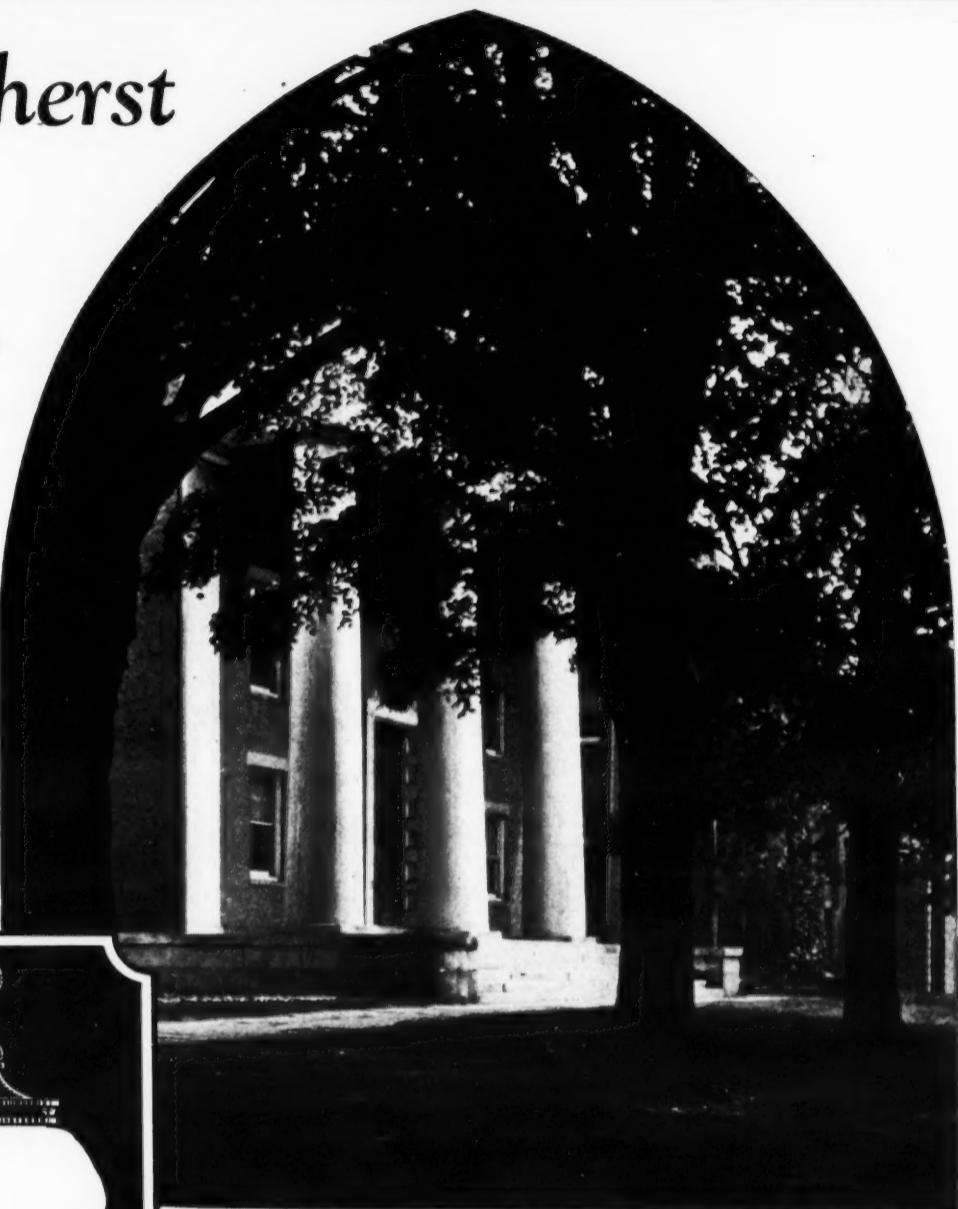
—Attorney General O. E. Carlstrom of Illinois has ruled that teachers on the pension list may return to teaching, their pensions ceasing while so engaged. When they retire, they are again eligible to the pension. The ruling was given in answer to question which had been raised in the schools of Adams county.

—Davenport, Iowa. By a majority of 187 votes, the citizens have approved a pension plan, modeled after those operated in Des Moines and Sioux City. The plan, which includes teachers, principals, and supervisors, will be placed in operation within a year.

—Superior, Wis. The school board has been asked to approve a proposal providing for a revision of the by-laws to the effect that the marriage of a woman teacher shall automatically cancel her teaching contract.

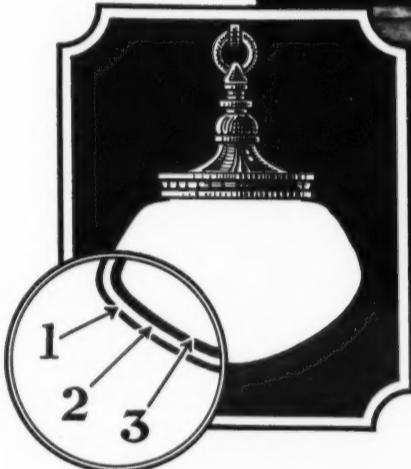
—Minneapolis, Minn. The school board, by a vote of four to two, has refused to undertake a survey of the teachers' salary situation, at an expense of \$2,500. The proposition was lost when the superintendent and four of the board members registered their opposition. The board voted to inform the Minneapolis taxpayers' association that they would welcome any survey which they wished to make at their own expense.

And Now Amherst Installs Celestialite-



**Celestialite's
Three Layers:
The reason for
its superiority**

Celestialite is a scientifically constructed glass that is made in three layers: (1) of crystal-clear transparency — for body and strength; (2) a layer of white glass—to diffuse the rays and soften the light; (3) a layer of blue glass —to whiten, clarify and perfect the light.



Some Recent Celestialite School Installations

Hershey School, Hershey, Pa.
Closter Grade & High School, Closter
New Jersey
Maplewood Junior High School,
Maplewood, New Jersey
School No. 4, Clifton, N. J.
Gantner Avenue School, East
Paterson, N. J.
Technical High School, Scranton, Pa.
Clifton High School, Clifton, N. J.
Brighton High School, Brighton,
Mass.

EDUCATORS invariably set standards of their own and they are usually standards worth following. For their standards are based on scientific researches involving tests, measurements, and long years of study. And when educators select lighting equipment, they will naturally select the equipment that minimizes glare, that will be restful to the eyes; that will most nearly reproduce daylight.

Amherst College now joins the large group of leading educational institutions that use Celestialite glassware. Their first order for the Physics Laboratory has recently been received. Among the other universities are Columbia, Wesleyan, Princeton, Pennsylvania, College of the City of New York, Stevens Institute of Technology, Rensselaer Polytechnic Institute. These schools and universities have installed Celestialite after making the most careful scientific tests of its merits.

Write us for free catalogues showing various designs suitable for classrooms, lecture halls and laboratories.

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KEPPING walls, wood-work and other painted surfaces thoroughly clean now, means less hard work during the summer shut-down.

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cleaning costs. Write and ask to have our nearby Service Man tell you all about it.

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Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.

School Business Officials Plan New Orleans Program

TENTATIVE PROGRAM FOR NATIONAL ASSOCIATION OF PUBLIC-SCHOOL BUSINESS OFFICIALS

The annual meeting of the National Association of Public-School Business Officials will be held May 20-23, at New Orleans, La. An interesting and helpful program has been arranged by Mr. C. E. C. Dyson, president of the Association.

The Program

Tuesday Morning, May 20

What the Layman Needs to Know About the Business Management of the Schools, Mr. Zeph Hilton, member of the board of education, Toronto, Canada.

Tuesday Afternoon, May 20

The Value to Superintendents of Departmental Per Capita Costs in Trade Schools, Mr. H. Giles Martin, director of the Delgado Central Trades School, New Orleans, La.

The Future Outlook in Financing Public Schools, Mr. William C. Bruce, Editor, American School Board Journal, Milwaukee, Wis.

The Lure and the Interest of the Small Schoolhouse, Mr. Harry D. Payne, architect, Houston, Tex.

The Peculiarities of School Building in the South, Mr. Roscoe P. DeWitt, architect, Dallas, Tex.

Wednesday Morning, May 21

The Superintendent and Business Manager of a School System in Coöperative Service, Mr. E. E. Oberholtzer, superintendent of schools, Houston, Tex.

Canadian Study in Educational Finance, Mr. N. H. Birbrough, chief accountant, Toronto, Canada.

The Necessity for a Detailed System of Accounting in School Districts, Mr. Edward Merchant, secretary of school board, Philadelphia, Pa.

Report of the Research Committee on Fire and Other Insurance for School Property, Mr. H. C. Roberts, secretary of school board, Sioux City, Iowa.

Report of Research Committee on Selection, Purchase, Storage, and Distribution of School Supplies, Mr. J. S. Mullan, purchasing agent and secretary, Rochester, N. Y.

Thursday Morning, May 22

The Financing of New School Construction, Mr. John B. Wynkoop, business manager, Bridgeport, Conn.

Vacuum Cleaning, Mr. H. S. Ganders, Syracuse University, N. Y.

Friday Morning, May 23

Report of the Third Annual Convention of the State of California School Business Officials, Mr. W. E. Record, business manager, Los Angeles, Calif.

Report of Research Committee on School Cost Accounting, Mr. R. L. Daly, St. Louis, Mo.

There will be a number of round tables on buildings and grounds, small-town problems, finance and insurance, supplies and purchasing, and maintenance problems.

The Montana School-Board Association Meets at Billings

The Montana School-Board Association held its fourth annual meeting at Billings, on Friday and Saturday, March 21 and 22. Mr. Dominic Spogen presided in the absence of the president, Mr. R. C. Elting. A total of 79 districts were represented at the meeting, including 6 first-class districts, 26 second-class districts, 42 third-class districts, and 5 county high schools. Mr. C. E. Durland, of Billings, gave the address of welcome, and Mrs. Joseph Chivers, of Helena, gave the response.

After the appointment of the various committees to serve during the next year, attention was given to the Equalization Fund. It was suggested that some changes should be made in the administering of the funds in order that it may be handled more equitably. Mr. Thomas Layfield and Dr. W. P. Reynolds spoke on conditions prevalent in their districts.

The meeting on Friday afternoon was opened by Mr. Fred T. Parker, of Hamilton. Mr. Dominic Spogen opened the discussion on the subject, "Transportation of Pupils." It was brought out that the methods of administering the law were sometimes unjust, and that there were various methods used over the state which were not equitable to all the districts under varying conditions. Mr. Fritz Roll, of Great Falls, was named chairman of a

special committee to prepare a bill to be presented at the next legislature for the correction of some of the conditions cited.

The next subject, "Supplementary Budget Law," was taken by Mr. L. E. Rhodes, of Havre, who explained the working of the law. Mr. E. V. Cline, of Billings, pointed out that it was working a hardship on those districts which had already provided a sufficient balance at the end of the fiscal year to run their schools until next November. Mr. J. E. Baltzell, of Worden, suggested that some means be provided by law so that county treasurers could be authorized to loan other than strictly school funds to take up the slack caused by the cessation of receipts from December to April. Mr. C. M. Strawman, of Moccasin, suggested that some means be provided so that balances in the sinking fund might be invested in registered school warrants, the interest to be credited to the sinking fund upon the repayment of the warrants. Mr. J. M. Hiner, of Reed Point, talked on the inadvisability of using sinking-fund balances for purposes other than those intended by law, and Mr. W. A. Lynn, of Harlowton, suggested an amendment of the law to limit the supplemental budget levy to one mill instead of three mills.

(Concluded on Page 108)

Now Another School Knows the Value of **BLOX-ON-END Floors**

*Partial view of
shops in State
Trade School,
Hartford, Conn.
Floored with
16,500 sq. ft.
of Bloxonend.
CARL MALMFELDT
Architect*

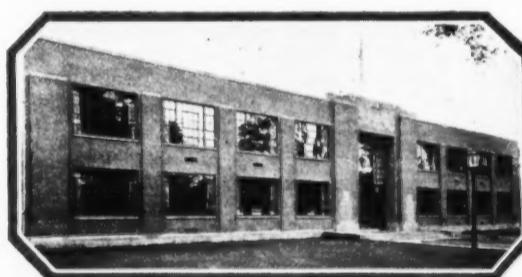


ALTHOUGH the above building is comparatively new the students and faculty have already become enthusiastic boosters for Bloxonend floors, because it doesn't take long for a Bloxonend floor to demonstrate its true worth.

Leading School Architects everywhere agree that no other flooring material has yet been found to satisfactorily fill the place of modern Carter Bloxonend for school shops and gymnasiums.

Architects know there are never any splinters or soft places in Bloxonend floors, because the tough end grain is the surface of the floor—they know that Bloxonend of Southern Yellow Pine is exceedingly sturdy and of splendid appearance, is smooth, quiet and resilient—and, that the life-span of a Bloxonend floor, even in a busy school shop, is greater than the life-span of the person who buys it.

Our booklet "School Floors" contains much information of value to the School Architect or official. It also tells how Bloxonend is made, gives specifications for laying and illustrates representative school installations. May we send you a copy? A postcard or letter will bring it promptly.



*An exterior view of the State Trade School,
Hartford, Conn.*

CARTER BLOXONEND FLOORING COMPANY
KANSAS CITY, MO.—Branch Offices in Leading Cities—See Sweet's

BLOX-ON-END FLOORING

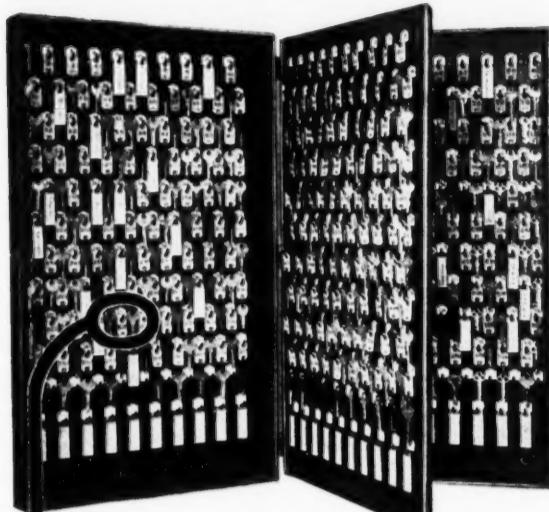
Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards.



*Lay's Smooth
Stay's Smooth*

*Leading School Architects specify
Bloxonend Floors for Shops and
Gymnasiums in the country's
best schools.*

.....THOSE KEYS!



Close-up View of HooKstrip, MarKer, Receipt Holder

HooKstrip—Individual units consist of 8 HooKs and Label Pockets stamped out of one piece of steel, 12 inches long.

MarKer—Durable, non-detachable, permanent tags lock to the key by pressure of thumb. Made of strongest gray and red fibre; also brass.

ReceiptHolder—Made of brass—used to replace borrowed keys upon HooKs.

"Pet" methods for keeping them give way to this simple system...complete, adaptable, fool-proof

TELKEE
TRADE MARK

The answer to "Where's that Key?"

This idea of guaranteed control of every single key in our modern school buildings developed after years of study, comparison, asking questions. TELKEE is a system that does what practically every "make-shift" plan of keeping track of keys overlooks—records responsibility for loss or theft; puts the same up-to-date efficiency into safeguarding of keys—from a dozen to many thousand—that you have in your correspondence files.

TELKEE will identify, protect, classify and control your keys, the same as it is now doing in such representative modern school buildings as:

Roosevelt High School, Los Angeles;
McKinley Technical High School, Washington, D.C.;
Audubon High School, Los Angeles;
Bret Harte High School, Los Angeles.

The illustrations to the left show a TELKEE

Wall Cabinet. Wall cabinets like this come in a variety of sizes and with a capacity of keys from 30 to 1200. See how conveniently and compactly ideal key storage is provided. It is made of heavy-gauge, cold-rolled steel; heavy hinges; padlock control. Fasten to wall, and when locked it cannot be removed. Rows of HooKstrips are welded into place inside safe. Each HooK will hold four duplicate keys. Olive green finish. These Cabinets provide a perfect system in the most compact, convenient form.

TELKEE is also provided in Drawer File arrangement, with sturdy, all-steel floor cabinet—a most compact and convenient form.

Whatever your most suitable requirement in a key control arrangement, TELKEE can provide it. Individual service is a big point to consider. Write for full information; also the name and address of the nearest sales representative.

Let TELKEE put an end to wasteful key confusion.

TELKEE devices patented and manufactured solely by

Thayer TELKEE Corporation
TRADE MARK
656 South Los Angeles Street, Los Angeles, California

(Concluded from Page 106)

Miss Elizabeth Ireland, state superintendent of public instruction, who talked on "The Equalization Fund," outlined the methods under which the fund is being operated, and showed that a total of 509 districts had been aided. The fund, which is derived from inheritance taxes and partial taxes on metal mining and gas and oil royalties, is intended only for the needs of the elementary schools. It was conceded that the fund is unfairly distributed to the districts and that some method should be devised for correcting the condition.

"Census Basis of Distribution of State and County Apportionments" was taken up by Mr. L. E. Rhodes, of Havre, Mr. B. F. Gaither, of Worden, Mr. H. H. Haight, of Lewistown, and Mr. Spogen. It was the consensus of opinion that the census basis of distribution of the apportionments should be made on either a teacher-attendance basis, or on a combination of both.

The meeting on Saturday morning was opened by Mr. F. H. Livingston, of Wolf Point, who spoke on "Penalty and Interest Law and Present Test-Case Situation." He outlined what had been done in the past by the special committee in the matter of crediting penalties and interests on delinquent school taxes to the fund. He gave figures showing that as a result of the 1929 law, a total of \$118,317 had been credited to school districts in 45 counties, and also that back penalty and interest amounting to \$143,037 had been credited to school districts in three counties. A supreme court decision will be rendered, which if favorable to the school district, will be the means of the collection of a vast sum for the various school districts of the state. He commented on the teacher-placement bureau and suggested that some means be evolved for correcting the extravagant method of employing teachers.

The next speaker was Mr. W. M. Johnston, of Billings, who gave an address on "Millage Tax and Bond Issues for State Institutions," outlining the need for such a tax and bond issue.

Mr. A. T. Peterson, of Billings, outlined the work of the commission on the revision of high-school laws, and suggested that a plan be adopted for revising the high-school laws on a broader basis

than at present. Difficulties of bonding in the smaller districts were brought out, and it was suggested that larger units should be created to raise sufficient money for building purposes.

At the meeting on Saturday afternoon, Mrs. H. A. Borcherding, of Moore, gave a talk on "The Duties of Members of School Boards," in which she touched briefly on the qualifications of school trustees and on the proper selection of school boards. She argued for a model board of education in point of organization, deliberation, and effective service.

Mr. Dominic Spogen discussed the subject, "Creating Sinking Funds for Future Building Operations," citing an example which existed in a certain district. He suggested the passage of a law which would empower school trustees to create a reserve fund for emergency building and repairs.

Resolutions adopted by the delegates recommended that the state laws on the transportation of pupils continue for another year before any changes are made. It was recommended that the question of changing the basis of distribution of the state and county funds be referred to a special committee, to work out plans for presentation at the next annual meeting. A resolution asking for one cent out of every five cents collected by the state gasoline tax for the school fund failed of passage.

The meeting closed with the election of officers for the next year. Mr. J. D. Wallace, of Butte, was elected president; Mr. C. H. Asbury, of Crow Agency, vice-president; Mr. J. C. Haglund, of Cut Bank, second vice-president; Dr. W. P. Reynolds, of Stevensville, third vice-president; Mr. E. L. Marvin, of Billings, secretary-treasurer. Executive committee chosen by the delegates consists of: Mrs. George Hirst, of Lewiston; A. E. Wiggins, of Great Falls; Fred T. Parker, of Hamilton; G. G. Hoole, of Glendive, and A. N. Smith, of Columbia Falls.

The Minnesota State School Board Association has reelected L. H. Colson, of Wadena, for a third successive term as president. Dr. C. L. Blunt, of Albert Lea, was elected vice-president. The board of directors renamed John E. Palmer, of Montevideo, as secretary-treasurer.

SAN FRANCISCO TEACHERS VOTED RAISE IN SALARY

A salary schedule proposed by the citizens' committee on teachers' salaries, with slight modifications, was accepted by the San Francisco board of education at an executive session on April 16. The new schedule which was voted on at a meeting on April 22, has been officially adopted.

Under the schedule, increases for individual teachers range from \$100 a year for inexperienced teachers entering the system, to almost \$1,200 a year for teachers with twenty years' service, in the San Francisco schools. The schedule provides for a minimum entrance salary, with yearly increases, to a maximum reached in fifteen or twenty years, the exact period of the increase to be settled later.

The old and new schedules follow, with the old schedule given first:

Teachers in elementary schools, \$1,400 to \$2,400 a year, raised to from \$1,500 to \$3,072; junior high schools, \$1,600 to \$2,600, raised to from \$1,800 to \$3,600; high schools, \$1,800 to \$2,800, raised to from \$2,004 to \$4,056.

The new schedule, which provides an increase of from \$10,000 to \$12,000 a year for Supt. J. M. Gwinn, becomes effective immediately, due to Mr. Gwinn's length of service. Increases for the deputy superintendents and principals operate over five-year periods, with the maximum reached at the end of the period. The chief deputy is raised from \$5,360 a year to \$6,600, with a maximum of \$7,200; other deputies, now drawing \$4,500 to \$5,160, are increased from \$6,000 to \$6,600; principals of high schools with 61 or more teachers, are raised from \$4,500 to \$5,640 with a maximum of \$5,940; in high schools with less than 61 teachers, from \$4,300 to \$5,340, maximum \$5,640; junior-high-school principals from a present maximum of \$4,200 to a minimum of \$4,380, maximum of \$5,160; elementary-school principals now drawing from \$3,120 to \$3,720 to draw from \$3,000 to \$4,320. All department heads are to be paid a teacher's salary for their grade and service, plus \$300 a year.



Durability, Beauty and Economy are combined in **DURABILT STEEL LOCKERS**

A Few of the Many Prominent Construction Features

Rigid Door Frame.— $1'' \times 1'' \times \frac{1}{8}''$ hard steel angle uprights. $1\frac{1}{2}'' \times \frac{3}{4}''$ No. 14 gauge formed steel channel cross members securely joined to uprights at each end by two $\frac{3}{16}''$ countersunk head rivets, as riveting for this purpose is much stronger than welding. (Since the strength of any locker is dependent on the rigidity of the door frame, it will pay you to look into this point carefully when selecting locker equipment.)

Scientifically Reinforced Door.—There are full-length tubular reinforcements on vertical edges of door, also hemmed flanges on both top and bottom of door. (No danger of bottom flange of door being bent out of shape by stepping on it.) Corners of door are securely tied together by means of arc welding.

Perfect Fitting Top and End Finishing Strips—attached by means of concealed screws. (By far the neatest and most attractive trim ever furnished for recessed locker installations.)

Quiet Automatic Latching Device.—(No metal to metal contact when door is being closed.) This Patented, Tamper-proof Latching Device is *Concealed* inside the vertical tubular reinforcement of door.

Patented Stamped Steel (not cast) Straight-Lift Handle.—With curled grip which provides ample space for comfortable hand-hold.

Padlocking Attachment with Rubber Silencers.—Arranged for use of any standard padlock; and in addition, is designed with two rubber silencers so that noise is practically eliminated when handle is raised or lowered.

Reinforced, full looped (metal formed completely around pin), **five-knuckle, Strap Hinge.**—Attached to door with two Binder Head bolts, permits door to open approximately 180 degrees. Three each on single tier and double tier standard lockers. The hinges are riveted to the door frame directly opposite the lock fingers, as this gives added security. Hinge pins are embedded in angle so they cannot be driven out, neither would the removing of hinge bolts make it possible to enter the locked locker without a key.

Reinforcing Plate Under Hinge.—(This is a No. 14 gauge plate welded to inside of door which serves as an added protection against exceptionally rough treatment.)

Improved Lock Fingers with Rubber Silencers,—which reduce noise from slamming of doors.

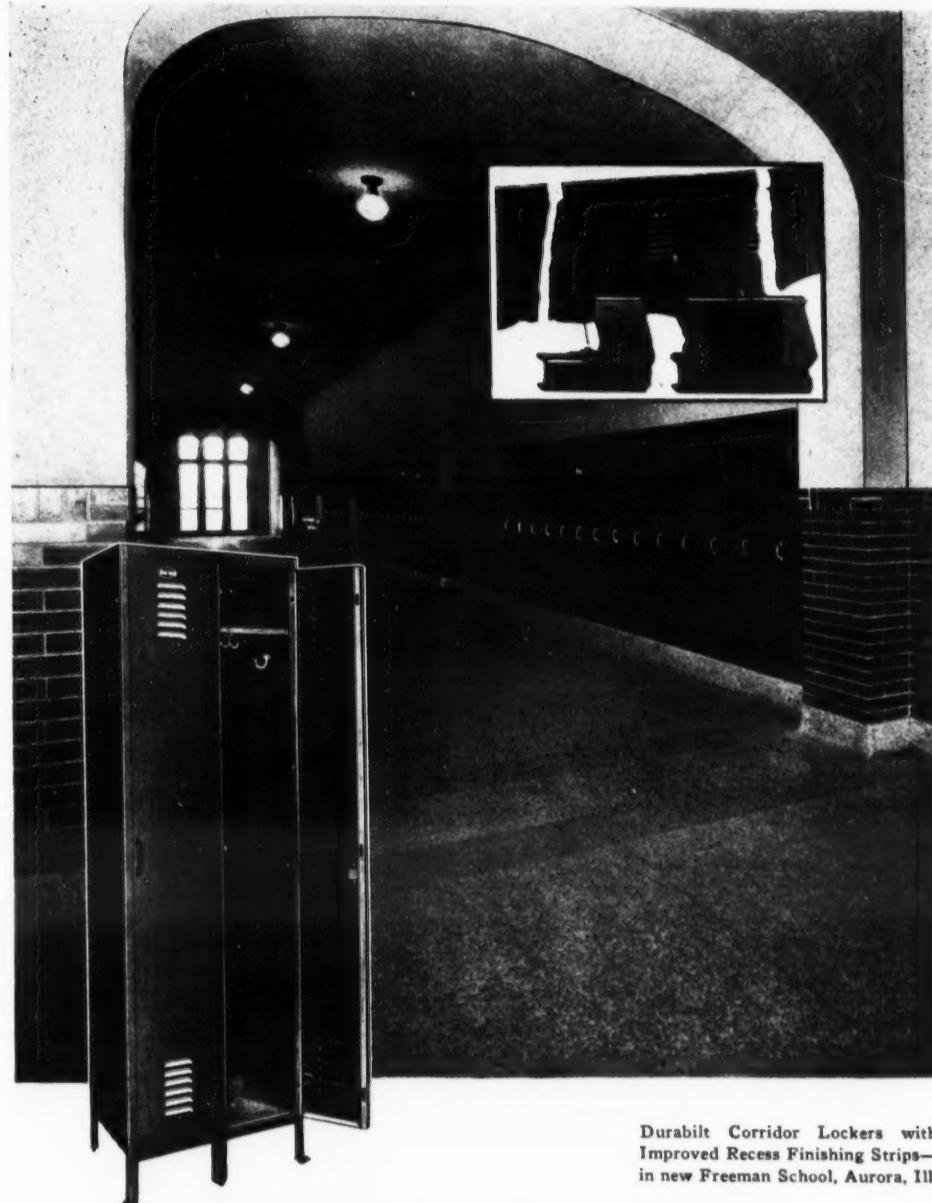
Automatic Locking Bar Release.—(Closing of door automatically releases locking bar, permitting it to quietly drop into locked position.)

All Coat Hooks attached with two screws—making it impossible to twist off by hand or remove without use of tools. Udylite Rust-proof Finish.

Flush Bottom.—(Easily cleaned and built strong enough so that standing on bottom will not injure it.)

Adjustable Rear Legs.—(Very desirable for leveling up rear of lockers when floors are uneven.)

Adjustable Front Feet.—(Permit anchoring and taking up of irregularities due to floor unevenness.)



Durabilt Corridor Lockers with Improved Recess Finishing Strips—in new Freeman School, Aurora, Ill.

Beautify School Corridors

An important feature in connection with a Durabilt installation of recessed corridor lockers is the Improved type of Top and End Finishing Strips which are furnished.

The illustration above shows how Durabilt Recessed Lockers with their neat and attractive trim actually beautify school corridors.

There are no exposed bolt heads or screws to mar the appearance of Durabilt Finishing Strips. They add the "finishing touch." In fact, with their smooth, enameled finish they rival the buildings' finest wood or marble trim.

School authorities, architects and many

other buyers call on us for advice and help in planning locker installations. We are always at your service to assist in the preparation of locker plans and specifications that will insure a satisfactory installation.

For complete information as to the service Durabilt can render, phone our nearest Sales Office or write us direct at Aurora.

If you desire literature, request our fourteen-page locker folder No. 6000. This will place you under no obligation. We suggest that you give your locker requirements early consideration this year—now—before the summer rush.

No better built than Durabilt!

DURABILT STEEL LOCKER CO.

400 ARNOLD AVE.,

Sales Offices in all Principal Cities

AURORA, ILL.



These Schools and Colleges Have Gas Though There Is No Gas Plant in Town

**Typical
Schools
Using
SKELGAS**



**Used in
Cooking
and Science
Laboratories**



The schools and colleges pictured on this page are but a few of those located in smaller towns and cities not having a municipal gas plant yet which offer complete, modern courses in cooking and science, being equipped with gas hot plates, ranges and Bunsen burners using Skelgas.

Skelgas is real natural gas freed from inefficient and soot-forming elements. The Skelgas story on the next page, written by Dr. C. K. Francis, gives interesting facts about the use of individual gas equipment which is efficient, safe, dependable and economical.

SCHOOL AUTHORITIES PRAISE FUEL

The following excerpts from letters received from school authorities show how highly satisfactory the service given by Skelgas is. Space permits but a few quotations.

"The Skelgas plant is eminently satisfactory. I wish to mention particularly the uniformity of heat, ease of adjustment, simplicity, cleanliness and convenience. We are more than pleased with it." (From Missouri)

"We installed Skelgas some time ago. The teachers and the board can't say enough for it. It is very fast, very clean to handle and is always ready. We only regret we did not install it before. The operating cost is low." (From Minnesota)

"After using Skelgas for six months, must say it is entirely satisfactory in every way." (From Kansas)

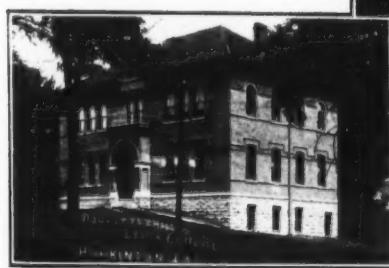
"Skelgas is proving very reasonable in cost, especially when we consider the low cost of installation, interest on our investment, negligible depreciation and repairs, and the unavoidable waste in all student laboratories. The average cost per student per week in the three science departments is about five cents." (From Missouri)

"Skelgas was installed . . . early in 1929 and, since its installation, has been used with entire satisfaction." (From University of Arkansas)

You are urged to read of what Skelgas offers your school. See the next page for Dr. Francis' article.



**GAS
for All Laboratory Uses**



Rural and Small City Schools May Now Have Gas Service in Laboratories

RECENT DEVELOPMENT PROVED PRACTICAL AND MANY SCHOOLS AND COLLEGES IN TOWNS WITHOUT GAS FIND MANIFOLD ADVANTAGES IN INDIVIDUAL GAS INSTALLATION

By Charles K. Francis, Ph.D.

Up until now, rural and small town high schools and colleges located in smaller cities not having a municipal gas plant have had to get along in their science laboratories with substitute fuels which have seriously hampered experimental work. Important chemical experiments have necessarily been passed over because the intense heat given by gas was required and this heat could not be secured from available fuels.

Now gas may be had without city mains. No longer is it necessary to have a municipal plant, for gas has been made portable. No matter if you are far from a central supply, gas is now available for use in your school.

This gas is marketed under the trade name of Skelgas. It is a product of Skelly Oil Company, one of the country's largest producers of natural gas. Skelgas is real natural gas freed from inefficient, low heat producing and soot-forming elements. It is the very heart of real natural gas, compressed and delivered to your school, bringing real gas service for your science and cooking laboratories. Wherever you need gas, you can efficiently meet the need with Skelgas.

Compact Installation

Skelly Oil Company stresses the point that Skelgas is real gas. It is not to be confused with any gas substitute, for it is not a substitute. Skelgas is delivered to schools compressed in safe, steel cylinders. Outside the school building stands a steel cabinet containing two cylinders of Skelgas. The installation is most compact. Regulation piping conducts the gas to your science and cooking laboratories where it is burned in Bunsen burners, hot plates, and ranges just as you would use city gas. Your students just strike a match, turn on the burner and light the gas.

The Skelgas operating equipment is simple in design, sturdily built to withstand years of use and requires no attention on the part of the user, except when one cylinder of gas is used up. Then the turning of two valves brings the second cylinder into operation. A full cylinder is ordered and easily installed. Two cylinders of Skelgas are installed in the cabinet. Gas is used from but one cylinder at a time so a plentiful supply of gas is available at all times. The cabinet is equipped with a lock, so there is no danger of the operating equipment being tampered with by students. The Skelgas

equipment is listed as standard by the Underwriters' Laboratories. It is safe, dependable, convenient and efficient. School authorities say they are surprised at the economical service it gives.

Meets with General Approval

Skelgas has been developed by Skelly Oil Company to meet a very definite need—to bring gas service to homes and schools beyond city mains. Skelgas is not an experiment. It has been in use for over two years and is now used every day in thousands of homes throughout the middle west and in an ever-increasing number of schools and colleges.

Superintendents and principals in Skelgas equipped schools are high in their praise of this fuel, stating the more thorough development of science courses it permits and the low cost at which it brings the conveniences and benefits of real gas service. Letters have been received from many educators telling of the very satisfactory service given by Skelgas; the economy of operation; the advantages it brings, enabling the small city and rural school to offer really modern courses in chemistry and cooking.

The "Heart" of Natural Gas

In the production of Skelgas, Skelly Oil Company removes the methane and ethane, which you know are low heat producers. The heavier hydrocarbons are condensed out, for these are dirt and soot formers. The resulting product is the hottest, cleanest-burning fraction of natural gas—the very "heart" of natural gas.

Appliances designed and built for use with Skelgas are constructed to take full advantage of the unusually high heat content. Tests prove that, volume for volume, Skelgas is nearly three times as hot-burning as ordinary natural gas; contains some five times the heat units produced by the usual manufactured (artificial) gas. Consequently a low flame gives intense heat; the air mixture is maximum and gas consumption is cut to a minimum. Chemical experiments calling for high temperatures are easily and perfectly performed when Skelgas is used. The clean Skelgas flame is ideal for glass blowing and all work where contamination from impurities in the fuel means inaccurate results.

Popular in Cooking Laboratories

Every domestic-science instructor knows how difficult it is to really teach the fine art of cook-

ing when only wood or coal ranges or, perhaps, oil and gasoline stoves, are available. Cooking failures are frequent because the temperatures cannot be controlled. Much valuable time is lost in re-fueling the range, in pumping up pressure, and the cooking laboratories are kept clean with greatest difficulty.

With Skelgas there is no fuel to bother about. Just strike a match and light the gas. The Skelgas flame is intensely hot-burning, is clean and sootless.

For individual use, hot plates are usually provided and serve as a stove for all top-range cooking problems. Ranges are offered for baking and meal preparations which include the very latest features such as efficient oven insulation, automatic oven heat regulators, volcano-type gas ports, and so on. These ranges are finished in stain-resisting porcelain enamel with bolts and piping concealed so the instructor finds it easy to keep the range spotlessly clean at all times with practically no effort.

Enlarges Scope in Chemistry

Chemistry teachers pass by important experiments in many schools because the laboratory lamp cannot give the heat necessary to produce the required chemical reaction. Students suffer because these important experiments must be merely described and discussed; not actually worked out by them or before their eyes. With Skelgas, just strike a match and turn on the gas. Instantly, there is an intensely hot, clear blue, clean flame, ideal for chemical experiments.

Superintendents, principals, school board members, domestic science and chemistry teachers in schools not enjoying the benefits of gas service are invited to write the Skelgas Utility Division of Skelly Oil Company. Your inquiry will bring information regarding any special problems you may have. There is absolutely no obligation whatsoever. The name of your nearest Skelgas Dealer will be sent to you so you may actually see and use Skelgas in his store yourself.

Thousands of housewives, school officials and teachers know from actual experience that Skelgas is all it is claimed to be. For your convenience, there is a coupon at the bottom of this page. It is suggested that you fill it out and mail it today. It entails absolutely no obligation on your part.

LET YOUR STUDENTS ENJOY REAL GAS IN YOUR LABORATORIES

Gas for
Science
Laboratories



Gas for
Cooking
Laboratories

MAIL THIS COUPON TODAY — NO OBLIGATION

SKELGAS UTILITY DIVISION
SKELLY OIL COMPANY
El Dorado, Kansas.

Please send full information about SKELGAS for school use.

Name..... Town..... State.....

For School Sanitation ~ SOLARIZE WITH Solar Self-closing Receptacles

The proper handling of waste material is one of the most perplexing yet one of the most easily solved problems of school maintenance. Perplexing for

- 1 Reduce Cleaning Costs**—Solar swinging top actually compels use. Removable inner containers lift out complete with contents.
- 2 Eliminate Fire Hazard** Solar top swings open only to admit rubbish, and being all-steel is ever closed against fire danger.
- 3 Sanitary**—Solars keep flies from breeding and feeding on waste matter. They are definite aids to cleanliness.
- 4 Reduce Plumbing Expense**—Small models designed for sanitary napkin disposal in girls' toilets eliminate plumbing troubles.
- 5 In Keeping With the Finest Surroundings**—Solars harmonize with attractive surroundings, replacing untidy open containers.
- 6 Last a Life Time**—Solars are everlasting. No replacements—nothing to get out of order. Will withstand hardest usage.

Like Silent Sentinels they stand guard wherever waste accumulates. Having only one moving part and no complicated mechanism, there is nothing about the Solar that can wear out, fail to operate or otherwise give trouble. Being gravity operated and absolutely controlled by the hand which is in the act of depositing waste, there can be no danger.

The automatic top cannot slam shut—it cannot close except as the hand is removed—it is safe for little children. You will never know how the student can help in your campaign against scattered rubbish until you install Solars. Write for complete information.



**The Silent Sentinels
of Sanitation**

Solar-Sturges Mfg. Co.,

Melrose Park, Illinois

A Study of Age-Grade Statistics at Harrisburg, Pa.

In a special report on "Enrollment and Attendance," presented to the school board of Harrisburg, Pa., in December, 1929, attention was called to the number of pupils enrolled in all grades from one to twelve, inclusive for each year from 1921 to 1928. The report indicated that during these years there was a marked decrease in the enrollment in the first six years, and an increase in the number of pupils enrolled in the last six years, or the junior-senior high school. It was suggested that the decrease in enrollment might be due to a decrease in the birth rate and to the fact that the rate of progress through the schools had been greatly accelerated in the elementary grades.

In order to determine to what extent, if any, the acceleration had taken place, Mr. Austin N. Miller, chief attendance officer in charge of pupil accountancy, was asked to make a comparative report on the subject. Mr. Miller, in making his Percentages of Under-age, Normal, and Over-age Pupils in

Grades 1-12

Under-age Normal Over-age

Pennsylvania Second-Class School Districts, 1927	12	63	25
Harrisburg Schools, 1925	11	61	28
Harrisburg Schools, 1927	10	64	26
Harrisburg Schools, 1929	11	65	24

report, pointed out that the chief object of the study was to focus attention on existing conditions. The study, which dealt with under-age, normal-age, and over-age pupils, revealed that the average number of over-age pupils in the first seven grades in 1929 was better than the average for the Pennsylvania second-class school districts of 1927, while a poorer showing was made in grades eight to twelve, inclusive. Comparing the ratio in percentage between enrollment in each grade and the total enrollment, it was shown that the schools were retaining a larger percentage of pupils than was the case in the other second-class school districts. With very few exceptions, it was noted that

the respective schools had made a great improvement in reducing the number of pupils in the over-age group and in bringing them up to the normal grade. The average number of pupils under-age, normal-age, and over-age for the district in October, 1929, was practically on a par with the average of the second-class school districts of the state for October, 1927. It was suggested that if teachers and principals would study the figures carefully, further efforts might be made to bring pupils of normal age into their normal grades, and the record for 1931 would be much better than the average for the state.

It is interesting to note that there were 417 fewer pupils enrolled in the elementary grades in October, 1929, than there were in the elementary grades in October, 1925, while there was an increase of 217 pupils in the junior high schools and an increase of 467 pupils in the senior high schools for the period studied.

An examination of the table, showing the average percentage of pupils by grades in the three different groups, indicates that the number of over-age pupils in 1929 decreased on an average of 4 per cent from that of October, 1925, and that the decrease in the number of pupils over-age had taken place in every grade, except the eleventh, in which it had slightly increased, and in the twelfth in which it remained the same. This means that more than 500 pupils in Harrisburg increased their rate of progress through the schools and took their places as normal pupils after having been retarded as much as three years. It is fair to assume that a substantial financial saving has been effected in the schools as a result of this accelerating process. The greatest benefit has been received by the pupils themselves, who have been brought up to their normal grades in their educational work.

Grade	Ratio in Per Cent Between Enrollment in Each Grade and Total Enrollment	
	Second-Class School Districts October 1927	Harrisburg October 1929
1	12.7	10.8
2	11.0	9.2
3	10.3	9.0
4	10.4	9.3
5	10.2	9.6
6	9.9	8.8
7	9.4	8.9
8	7.7	8.5
9	6.7	8.5
10	5.2	7.4
11	3.6	5.8
12	2.9	4.2

It is estimated that, if the percentage of over-age could be reduced during the following six years, in proportion to the reduction made during the past six years, an ideal condition would prevail in the public schools. The study, which was considered the most important made by Mr. Miller on the subject, covered a period of six years of educational progress of pupils collectively. It is expected that it will be followed by another study showing the rate of progress of individual children in the respective schools.

PERSONAL NEWS

—SUPT. F. E. CONVERSE, of Beloit, Wis., has been reelected for another year.

—SUPT. T. M. CLEVENGER, of Waverly, Iowa, has been reelected for a two-year term.

—MR. E. E. AXTHELM, of Harvey, Iowa, has been elected superintendent of schools at New Sharon, to succeed N. J. Hibbs.

—MR. D. J. ROBBINS, of Cresco, Iowa, has been elected superintendent of the Cresco schools, to succeed Mr. C. M. Neveln.

—SUPT. H. DEKOCK, of Manson, Iowa, has been reelected for another year.

—MR. A. R. HOLST, of Minneota, Minn., has been reelected for a third year.

—MR. E. L. MARVIN, clerk of the board of education at Billings, Mont., has been elected secretary-treasurer of the Montana School Board Association.



PROVES BEST BY TEST

It Reduces Abrasion to a Minimum

*A CAR-NA-VAR Man Is Near You
to help solve your floor problems*

Compare a varnish or wax finish
with Car-Na-Var.



Varnish adheres but will crack and chip under constant foot traffic.



Wax, although pliable, will not adhere . . . It "pulls away" from the floor surface.



Car-Na-Var is both pliable and hard wearing. It is not affected by heavy usage. When worn spots appear in traffic lanes at doorways and in corridors, Car-Na-Var will refinish without showing "overlaps." It is unnecessary to refinish the entire floor area. This feature alone saves many dollars worth of maintenance expense.

A good floor treatment must protect the surface . . . clean easily . . . and effect an economy in the floor maintenance budget.

Drastic tests, under actual usage on thousands of floors, prove Car-Na-Var to be the ideal floor protective and beautifier.

A Scientific Combination

Car-Na-Var is a combination of fine varnish gums and high grade waxes. The varnish contributes long wearing life with a brilliancy in finish. The pliability . . . resistance to mars and scratches . . . comes from the wax content.

Showing percentage loss by Abrasion Test on different untreated floors.
Abrasion machine used for 20,000 revolutions.

LINOLEUM	WOOD	TERRAZZO	RUBBER
72.9%	33.8%	16.1%	19.8%

COLORS

Besides "Natural," Car-Na-Var is supplied in the following colors:

Maroon
Light Oak
Walnut

Cherry
Bright Green
Mission

Olive Green
Dark Oak
Mahogany

Offices in principal cities

Continental Chemical Corp.

250 Scott Street

Watseka

- Illinois

KEEP IN STEP



Keeping in step with modern floor maintenance progress embodying different surfaces presents many problems.

Shine-All, the universal neutral cleaner, assures complete maintenance in one operation for all types of floor surfaces, rigid or resilient.

Shine-All cleans, polishes and preserves with every application.

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Summer School For Janitor-Engineers and Custodians

The board of education of Minneapolis, Minn., has announced its regular two weeks' summer course for janitor-engineers and custodians, to be held June 16-21 for first-year students, and June 23-28 for second-year students. The school which has been in operation for the past fourteen years, maintains a competent staff of instructors, a laboratory and demonstration station, and a complete library.

The class and laboratory work of the training school are regularly conducted in the central training school, while the field practice and demonstration work are carried on in the several school buildings. Each course covers a period of one week, and six and one-fourth hours each day are devoted to intensive training in janitorial methods. The classes start at 8:15 a.m., and close at 4:00 p.m., with 1½ hours, from 12:00 to 1:30 for lunch.

The work is conducted in the training school of the Minneapolis school system, and students enroll for one or two weeks as desired, paying an enrollment fee of \$10 per week, or \$20 for two weeks' instruction. Special attention outside of class hours is given by members of the teaching staff to the answering of special questions asked by students.

Students from any part of the country are eligible to enroll in the courses. Good living conditions, available at moderate prices, may be obtained within a few blocks of the training school. During the past year, the attendance at the school averaged 450 students.

The following is the outline of the subjects offered in the school:

Outline of Subjects Taught

(c) means classroom instruction at the training school.
(l) means laboratory demonstration at the training school.
(f) means field work and demonstration in a public school building.

Housekeeping

Lesson 1. Qualifications of a janitor-engineer-custodian. (c)
Lesson 2. Job analysis — duties and responsibilities. (c)
Lesson 3. Tools — their construction, use, and care. (cl)
Lesson 4. Cleaning materials — classification and use. (c)

- Lesson 5. Cleaning, preserving, and maintaining floors. (c)
 - Lesson 6. Cleaning and maintaining various types of floors. (f)
 - Lesson 7. Cleaning vitreous china, metal, and glass. (cf)
 - Lesson 8. Vacation cleaning. (c)
 - Lesson 9. Determination of manpower and salary schedule. (c)
 - Lesson 10. Cleaning walls, woodwork, vitreous china, metal, and glass. (f)
- Maintenance and Management*
- Lesson 1. Cleaning boilers. (f)
 - Lesson 2. Use of compounds. (cf)
 - Lesson 3. Preparing a plant for operation. (lf)
 - Lesson 4. Furnaces and firing methods. (lf)
 - Lesson 5. Plant operation. (f)
 - Lesson 6. Laying-up boilers and mechanical equipment. (cf)
 - Lesson 7. Minor repairs to plumbing and electrical equipment. (cl)
 - Lesson 8. Suggestions and discussions on emergencies. (c)
- Heating and Ventilating*
- Lesson 1. Fuels — purchase and use. (cl)
 - Lesson 2. Hot-water-heating systems. (c)
 - Lesson 3. Hot-air-heating systems. (c)
 - Lesson 4. Steam-heating systems. (c)
 - Lesson 5. Boilers. (cl)
 - Lesson 6. Heating-plant auxiliaries. (clf)
 - Lesson 7. Pumps. Steam traps. (cl)
 - Lesson 8. Heating-plant auxiliaries. (clf)
 - Lesson 9. Valves
 - Lesson 10. Steam and oil separators.
 - Lesson 11. Steam and oil separators.
 - Lesson 12. Heat regulation and equipment. (clf)
 - Lesson 13. Ventilating systems. (c)
 - Lesson 14. Miscellaneous heating and ventilating equipment. (clf)
 - Lesson 15. Simple steam engines. (cl)

THE VALUE OF SCHOOL PROPERTY IN NORTH CAROLINA

The state education department of North Carolina has issued a report in which it shows that the total value of public-school property in the state has continued to increase, although not as rapidly and in as large amounts as in past years. The total appraised value of property used for elementary and secondary purposes is now \$107,856,892. This amount is \$6,927,527, or 6.9 per cent, more than the value for the next preceding year, 1927-28, and is the lowest amount of increase since 1920-21. The percentage of increase is the lowest during the past 25 years.

The report shows that the total number of schoolhouses for white schools has increased from

5,115 in 1904-05, to 5,769 in 1918-19, when the peak was reached. Since 1918-19 there has been a decrease, until now there are 3,672 in use by white children.

Of the total number, 3,321 are used by 441,979 rural children and 351 by 153,768 children in charter and city schools. There were 215 fewer rural and 18 more city schoolhouses in 1928-29 than in 1927-28.

Of the \$96,954,249 invested in school property for the white race, about 90 per cent represents the value of sites and buildings, and 10 per cent the value of equipment.

The per pupil investment in school property has increased from year to year in nearly all counties. In 1923-24, 13 counties had a rural per-pupil value of white-school property equal to \$100 or more. In 1928-29, there are 60 counties, each having a per capita value of \$100 or more per pupil enrolled. Nine counties now have an investment of more than \$200 per pupil in rural-school property for the white children.

THE WORCESTER BUILDING PROGRAM

The school committee of Worcester, Mass., has issued an illustrated brochure, showing how its school-building program begun in 1923, was carried out. This five-year program involved an expenditure of \$3,724,582, and covered some twenty-odd projects, new buildings, and additions. The brochure shows the new structures with floor plans, together with descriptive material.

The school committee consists of Walter J. Cookson, Harold W. Eaton, Walter H. Richardson, Enas W. Reidy, Joseph Francis Leahy, John P. Dyer, George H. Nelson, Wiley H. Marble, Alice H. Richard, John A. Clough, and Albert Farnsworth.

BUILDING NEWS

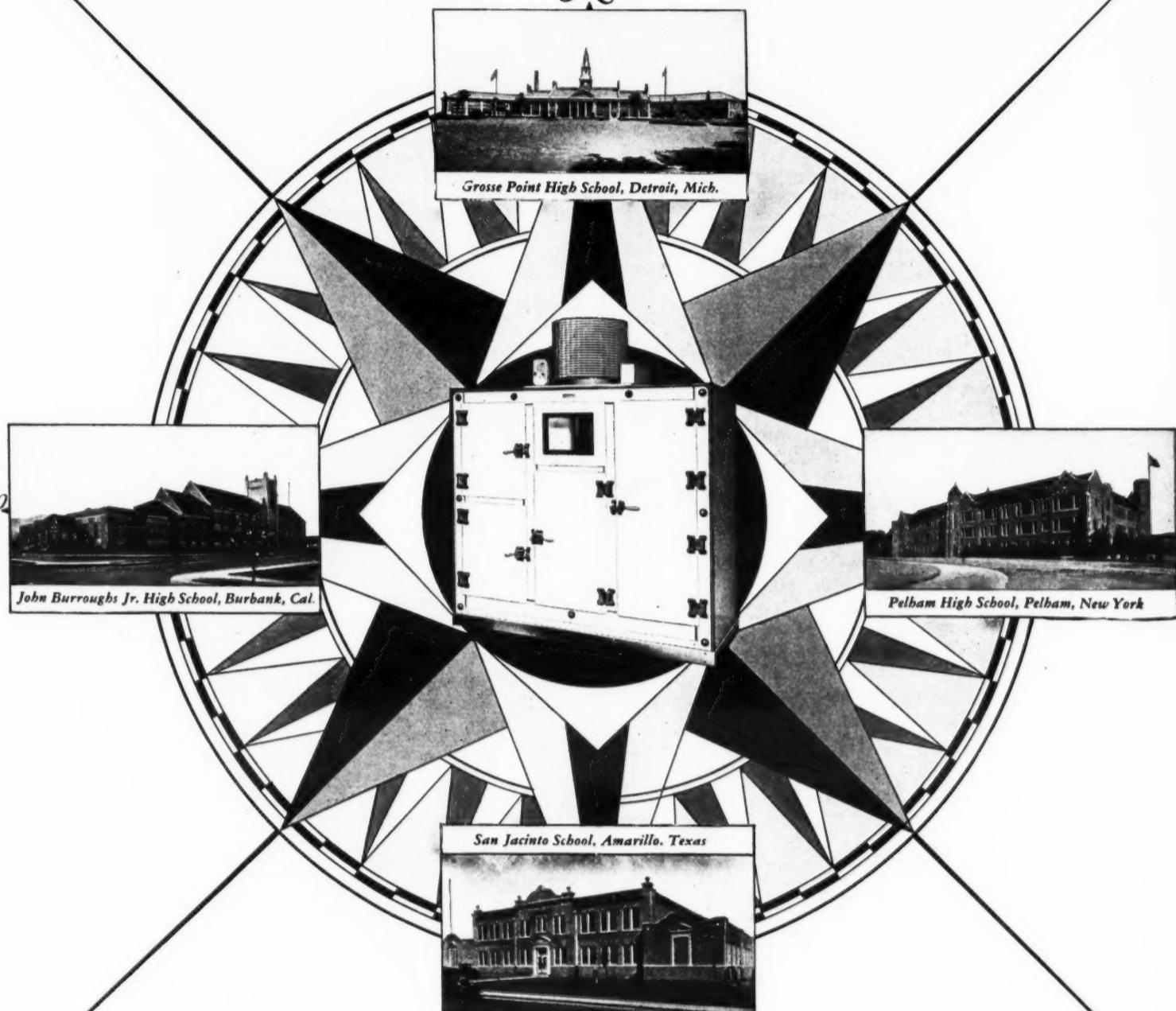
—Oil City, Pa. A thorough study of the physical status of the school plant will be made by a survey committee composed of Dr. Hubert C. Eicher, J. Y. Shamback, and Ellwood Castle. The study will be fourfold in character, providing for an evaluation of the school plant in regard to its salvage value and its functional value. It will in-

(Concluded on Page 116)

North...East...South...West

No wonder the schools are *installing* them

X



OF THE HUNDREDS OF THOUSANDS OF OWNERS
not one has paid a cent for service!

FOR safety, for convenience, for economy, schools large and small, old and new, are equipping their lunch-rooms with General Electric Commercial Refrigerators.

General Electric Commercial Refrigerators are so unfailing in their efficiency, that they may be plugged into the nearest electric outlet, and absolutely *trusted* to keep food and milk safely under the 50 degree bacterial danger point—always fresh and wholesome.

The entire mechanism with a *permanent* oil supply is *sealed in steel*, so that dust, moisture and rust are powerless to cause trouble, breakdowns and repair bills. If you are planning a new school, a new lunch-room, or modernizing an old one, be sure to send for our booklet on Commercial Refrigerators, or write us to send a specialist to talk over your specific requirements. Address Dept. CK-5, Electric Refrigeration Dept., General Electric Co., Hanna Bldg., Cleveland, Ohio.

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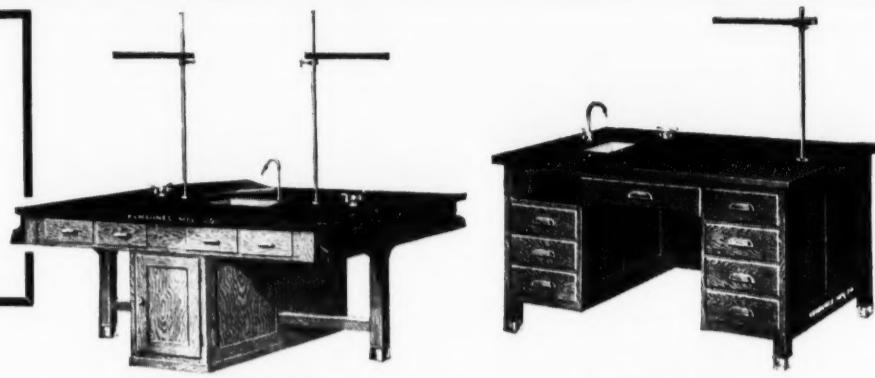
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Louisville	New Orleans	Little Rock	Denver	San Francisco
Nashville	Houston	Lincoln, Nebr.	Salt Lake City	Portland, Ore.
Columbus				Spokane

Phoenix
Los Angeles
San Francisco
Portland, Ore.
Spokane
Crystal Falls, Mich.
Montreal, Que.



Combination Chemistry and Physics Table No. D-605

No. F-1119 Instructor's Table



Chemistry Table No. D-764



Chemical and Apparatus Storage Case No. G-1452



Laboratory Table No. H-1543

(Concluded from Page 114)
clude a study of the present and future total and pupil population, and an outline of a building program to cover the next 15 to 20 years.

—Detroit, Mich. Working plans for \$1,266,206 worth of school buildings have been approved by members of the board of education in advance of the city's budget appropriation, so that an early start may be made and that the present unemployment situation may be relieved. Plans have been approved for seven school units, at least five of which will be ready for use in September. It is the purpose of the school board to erect sixteen elementary, two intermediate, and three high-school units during the coming year, provided the full \$5,400,000 building fund is approved by the city council.

—Plymouth, Mass. The school board has asked the city council for \$10,000, instead of \$40,000, to be used for school-building construction. In addition, there will be an issue of \$380,000 in 20-year serial bonds.

—Tiffin, Ohio. The school board has contracted with a refinishing firm for the refinishing of desks and classroom equipment to be used in the Minerva School.

—Springfield, Mass. The school board has intimated that it will expect the mayor to approve at least the first half of the proposed school-building program for this year. The board has experienced some difficulty in obtaining suitable sites, due to the fact that property owners have attempted to hold up the city.

—Cleveland, Ohio. A school-construction program, involving an expenditure of millions of dollars is planned by the school board to relieve congestion and fire hazards. The program will include the erection of three junior-senior high schools, the purchase of 12 new school sites, and additions to 14 schools.

—Manitowoc, Wis. The school board has issued a statement to the voters of the city, asking their approval of a \$300,000 school-bond issue and a new building program.

—Byron, Ill. The voters failed to approve a bond issue of \$48,000 for a community high school. The proposition will again be submitted to a vote of the people.

—The voters of Fairfield, Calif., have approved a bond issue of \$50,000 for rebuilding and enlarging the Armijo High School.

—Waterman, Ill. The voters at a recent election, approved a bond issue of \$40,000 for a high school and \$12,000 for a grade school.

—Gadsden, Ala. The citizens have approved a bond issue of \$100,000 for an addition to the high school.

—Holyoke, Mass. The school board has adopted a school-building program involving an expenditure of \$1,725,000. The program which will include a junior-senior high school, two elementary schools, and one portable building, will relieve the present unsatisfactory schoolhousing conditions.

—The school board of Tiffin, Ohio, has contemplated the renaming of the schools. Under the proposed plan, schools would be named after famous men. The plan was proposed some five years ago, but was recently revived in view of the fact that a new school is nearing completion in the Minerva district.

—Battle Creek, Iowa. The citizens approved a bond issue of \$45,000 on March 10. The proceeds of the bonds will be used for building an addition to the present building and for remodeling purposes.

—Joplin, Mo. The voters have successfully carried a school-bond issue of \$650,000 for school-building purposes. The bond issue, which is to complete a building program started four years ago, will be used to build two new schools and a number of additions to existing buildings.

—West Waterloo, Iowa. The citizens have approved a school-bond issue of \$200,000 for the erection of a graded school.

—New York, N. Y. The Edward B. Shallow Junior High School was dedicated on March 31, with fitting exercises.

—A new school building will be erected at Travelers Rest, S. C., to replace a building destroyed by fire. The department of schoolhouse planning of the state will act in an advisory capacity, coöperating with the architect in the preparation of plans for the building. Other new schools

to be erected are the Fort Mill High School at Fort Mill, S. C., to cost \$75,000; the Windsor School, to cost \$35,000; the Jonesville High School, to cost \$45,000; and the Kershaw County Consolidated District School, to cost \$45,000.

—New York, N. Y. The board of education has approved the contract for the Herman Ridder Junior High School, the new modernistic school, which is to be built at a cost of \$1,038,400.

—York, Pa. The school board has taken steps toward the carrying out of an extensive school-building program provided for in a \$1,500,000 electoral loan. The board has selected a site for the proposed junior high school to be built in the fourteenth ward.

—Wellsboro, Pa. A school holding company has been formed to issue bonds and to lease a school building to the district for a rental. It appears the school board has less than \$50,000 borrowing capacity under present limitations and this would be inadequate to care for the present school needs. The plan provides for the remodeling of the present high school, and for the construction of a new unit to form part of the proposed scheme.

—South Orange, N. J. The board of education has disposed of \$100,000 worth of school bonds to a local bonding house.

—Boston, Mass. The school board has presented to the legislative committee on finance, a request for a school-building program of \$3,860,000, which brings the total appropriation for the year to \$5,000,000. The new program, which provides for additional high, intermediate, and elementary schools, is intended to obviate the use of unsuitable rooms now used for school purposes.

—San Benito, Tex. The voters have approved a bond issue of \$320,000 for school-building construction. The program includes a senior high school to cost \$175,000. Other units now in use will be enlarged, and additional sites will be purchased for future expansion.

—Mansfield, Ohio. The school board has purchased a site for a school-administration building. An extensive school-building program, covering a five-year period, has been adopted for next year.

Adaptable to Classes and Sizes

Unit Movable
Desk Set



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HEYWOOD-WAKEFIELD

MAKERS OF PRACTICAL SCHOOL SEATING

How Washington Compels School Attendance

A. C. Monahan, Formerly U. S. Bureau of Education

The present Department of Work Permits and School Attendance of the Washington school system has been in operation for a little over four years, and some estimate of its work and effectiveness can be made. The consensus of opinion in the District of Columbia is that it has made a splendid beginning and, if it continues along the lines it has been following, it will become a model for the other school systems of the country. The United States Bureau of Efficiency, in a recent survey of the whole school system, is outspoken in its praise of this department, both in organization and operation.

The Act of Congress establishing the present Department of Attendance and Work Permits was passed in February, 1925, to become effective immediately. Organization took some time, so that it did not get into full working condition until the beginning of the new school year, in September, 1925. The bill that passed Congress was practically the bill of the school board, prepared by the superintendent for the board. To its preparation the superintendent, Dr. Frank W. Ballou, had given much time and study, consulting such authorities as Dr. P. P. Claxton, then U. S. Commissioner of Education, and Mr. Walter Defsenbaugh, specialist in city schools of the U. S. Office of Education. He consulted also many superintendents in other cities where modern machinery for school-attendance enforcement had been established. He brought together on the measure the most successful plans for compulsory attendance regulations that he could find, as well as the most effective workings of plans.

The principal features of the Washington Department of Attendance and Work Permits may be summarized as follows:

be summarized as follows:

1. The department is placed in the office of the superintendent of schools, and immediately under a director, who is, in turn, responsible to the superintendent and through him, to the school board.

2. It is charged with the duty of making and keeping up-to-date a *complete school census*. This includes every child in the District between the ages of 3 and 18, whether in permanent or temporary residence.

ment of temporary residence.

3. The department has the same authority over attendance in private and parochial schools as it does over attendance in public schools. Principals in such schools must report absence under the same regulations as principals in public schools.

4. It *centralizes in one office* under one authority, not only matters relative to school census and attendance, but also those relative to *child employment*.

FIG. 1. FRONT OF CENSUS CARD

5. At one office there is on file the record of school attendance, together with census data of every child in the District of Columbia, with full name, address, date and place of birth, sex, race, occupation of parent or guardian, name also of child's employer, if ever employed.

FIG. 2. PUPIL'S ENROLLMENT CARD

FIG. 3. BACK OF CENSUS CARD AND OF SCHOOL ENROLLMENT CARD

The office is under the direction of Miss Fay Bentley, who has been in charge since it was organized in 1925. She is a college graduate in education, holding the degree of Ph.B. Subsequently she completed a year of graduate college work in social service. In her college and graduate work, Miss Bentley pursued courses in education and social statistics. She has had experience with the Associated Charities in Chicago and the American Red Cross. Later she became an employee in the Federal Government, in the issuing of federal certificates under the provisions of the Child Labor Law. In May, 1922, when the Child Labor Law was declared unconstitutional, Miss Bentley became a special agent in the Children's Bureau of the Department of Labor.

In her work Miss Bentley is assisted by 12 attendance officers, 5 census enumerators, a stenographer, a child-labor clerk, and 4 file and record clerks. It is only because of the organization that this comparatively small staff can cover effectively the steadily increasing volume of work.

Form No. 87		PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA DEPARTMENT OF ATTENDANCE AND WORK PERMITS																															
Child's name _____		Date of birth _____										Grade _____																					
Address _____		Parent _____										School _____																					
REASON FOR REPORT MUST BE CHECKED																																	
Irregular attendance		Suspected truancy		Continued tardiness		To learn if child has left school																											
		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>															
Method of marking absence:		A. M. <input type="checkbox"/>		P. M. <input type="checkbox"/>		Both <input checked="" type="checkbox"/>																											
DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Dates Absent	Time Tardies
BEPT.																																	
OCT.																																	
NOV.																																	
DEC.																																	
JAN.																																	
FEB.																																	
MAR.																																	
APR.																																	
MAY.																																	
JUNE.																																	
Date reported _____		Teacher _____																															
A. M. _____		ATTENDANCE OFFICER'S REPORT																															
Visited P. M. _____, 19 ²		Interviewed _____																															
Classification of absences _____																																	
Causes _____																																	
(OVER) 8-1951																																	

FIG. 4. FORM FOR RECORDING AND REPORTING ABSENCES. THE BACK PROVIDES SPACE FOR THE OFFICER'S DETAILED REPORT

In 1925, when the office was organized, the entire staff helped take the school census by a door-to-door canvass. From the information collected, a file was made of every child in the District between the ages of 3 and 18, which card gives the name, address, sex, race, place and date of birth, occupation of parent or guardian, and name of the child's employer, if employed. This file is alphabetized, white and colored. It is kept up-to-date by an annual canvass, made by the attendance officers in the summer months, and by the reports of the principals of each public and private school. The principals are required by law to report to the attendance officer each child enrolling in or departing from any school, and other information needed from the files.

FIG. 5. RECORD FORM FOR TRUANCY CASES

RECORD OF ABSENCE										
19 <u> </u> Feb	Sept Oct Nov Dec	Apr	Jan	May	June	Total	Proceeding Since Last Term Year	Prin Prob.	During past six months number of times Reported to Attendance Officer	Attend Officer's classification of absences
										Specified cause of absence
PARENT ATTENDING										ATTENDANCE OFFICE HEARINGS
Mo Day	First Month	To Hearing	Since Officer's last visit			No. visits	Classification of absences.			
	F									
	Ah.									
Parent's Plea										Specific causes of absence
Remarks										
JUVENILE COURT RECORD										
Month Day Year	Judge	Charge	Person Responding			Result				
Date of first report _____ Officer: _____										

FIG. 6. BACK OF RECORD FORM FOR
TRUANCY CASES

The original census was completed in 8 months. A school-district file of families, made according to address, was made also from the original information. The schools were given these files covering their locality to check enrollment. They are duplicates of the main office file, except in color.

At the completion of the first census the following figures on enrollment were compiled:

	White	Colored	Total
Total enrollment	55,950	24,335	80,485
Public schools	47,925	23,733	71,678
Private schools	1,618		1,618
Parochial schools	6,405	782	7,187

Parochial schools 6,405 782 7,189

There were 11 attendance officers at the beginning of the work, which meant a proportion of 9,325 children to each white attendance officer, and 4,907 to each colored. This is a small staff for the school population. Philadelphia allows one attendance officer to every 3,500 children, New York City one to every 3,000, and the city of London, one to every 2,500. Comparison of the figures of the children served by white and colored attendance officers show that the white officers service twice as many children as the colored, but the volume of work is the same. The white schools reported for investigation the first year 9,027 cases of absences, the colored, 9,083. Of these only 2,985 were illegal, evenly divided among the white and colored.

(Concluded on Page 121)

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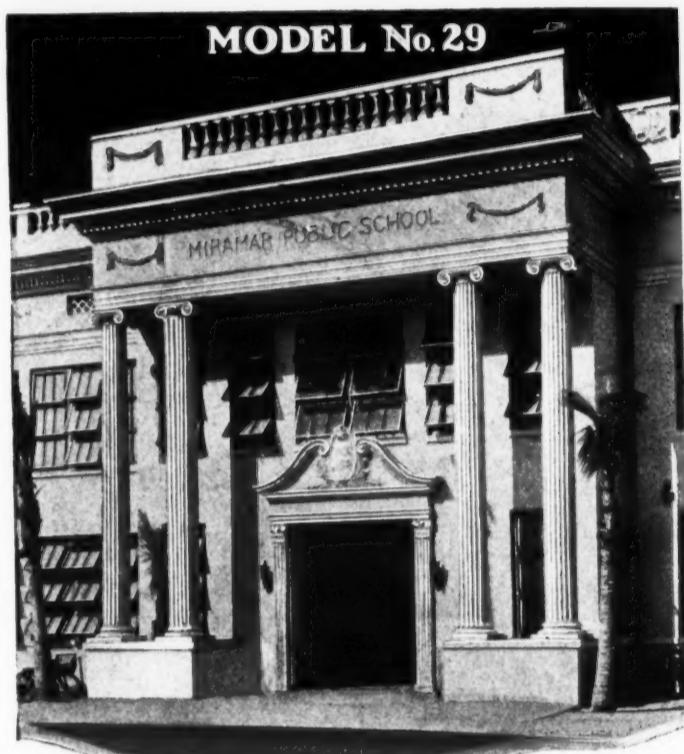
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 City _____ State _____

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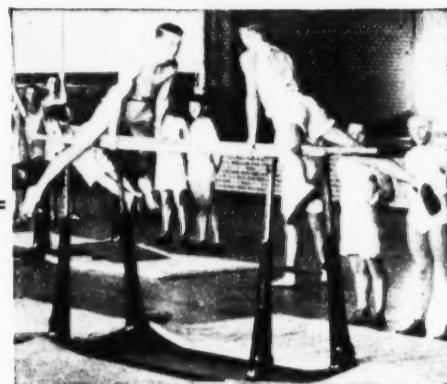
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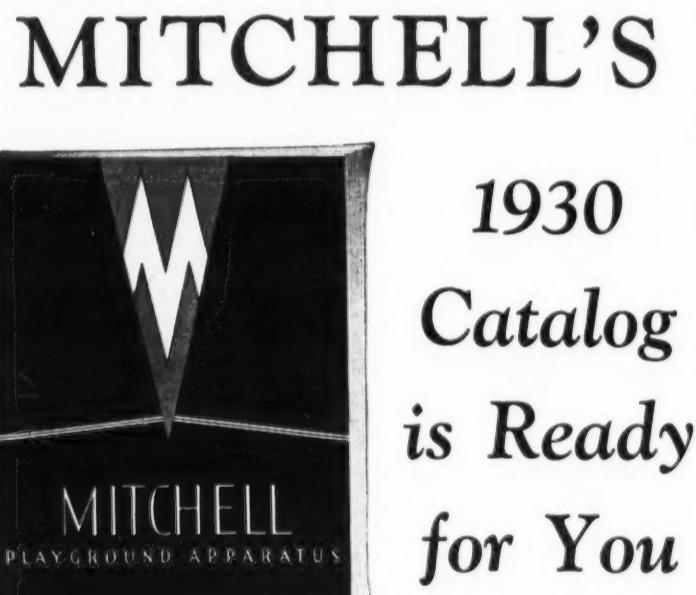
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Safe and economical seating to fit any seating need, can be arranged with Circle A Steel Grandstands. All but the foot and seat boards are built entirely of steel. Designed in accordance with the specifications of the American Institute of Steel Construction, they are entirely strong and rigid. Careful

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CIRCLE A PRODUCTS CORPORATION, 613 S. 25th Street, Newcastle, Indiana
Also—Circle A Bleachers—wood—sectional—movable.



(Concluded from Page 118)

The attendance officers work from 8:30 a.m. until 4:30 p.m. The officer goes first to one of her schools, instead of to the main office, and reports to the main office by telephone.

A few figures here show the volume of the present work:

Cases Reported for Special Investigation

Cases Reported for Special Investigation	Total	White	Colored
1928-29	42,283	17,595	24,353
1927-28	37,256	18,183	19,073
1927-26	28,609	13,080	15,529
1926-25	20,078	9,977	10,101

The third task of the Department of Attendance and Work Permits is to enforce the Child-Labor Laws and regulate the granting of work permits to all children of 18 years and under. The Child-Labor Laws were instituted in 1908, and are practically the same now, except that members of the police force until 1925, were the inspectors of places where minors were employed. This work now falls on the attendance officers. They visited the first year 82 places of employment, to inspect and instruct employers relative to the regulations of the Child-Labor Laws.

All employers of children under 16 are re-

Form No. 177

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF SCHOOL ATTENDANCE AND WORK PERMITS
FRANKLIN ADMINISTRATION BUILDING

INFORMATION CARD

(Date of first issue)

(Name of child)	(Month, day, year of birth)	(Evidence of age)		
(Birthplace)	(Color)	(Sex)	(School last attended)	(Grade completed)
(Name of parent or guardian)		(Address)		

Certificate refused—REASON:

1. Under age	3. Prohibited hours	5. Physical
2. Prohibited occupation	4. Educational	6. Unsatisfactory evidence of age

OVER II

Number of State Application No.

FIG. 7. FORM FOR RECORDING WORK APPLICATIONS

FIG. 8. BACK OF FORM, FIG. 7.

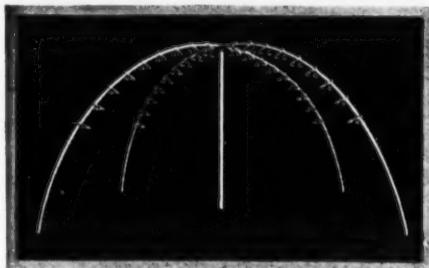
quired by law to secure and post employment certificates for these young employees. Permits are not granted to any children under 10 years. To those between the ages of 14 and 16 who have completed the eighth grade, certificates are granted. Children between these ages who have not finished the grades may secure permits to work between the hours of 6 a.m. and 7 p.m., but not during school hours. Boys between the

A Helping Hand to Teachers

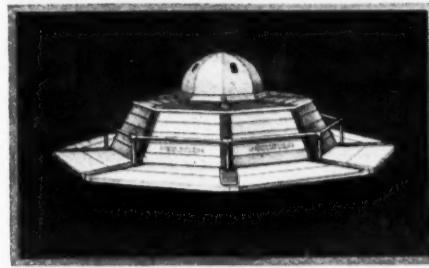
The Cicero Teacher's Welfare Association of Cicero, Illinois, organized in 1926, has set for itself a laudable task. The association collects annually approximately \$600 through a membership fee of \$3 per person. The teachers, as a group, through professional services outside of school hours, have contributed the sum of \$2,000 in order to establish the credit of the organization. During the year 1928-29 it paid out \$156 in benefit allowances. Through an arrangement with a Chicago hospital, 101 cases were cared for at a cost of \$450. Twenty-five members received flower benefits. The plan is

not to collect more than is necessary to the cost of operation.

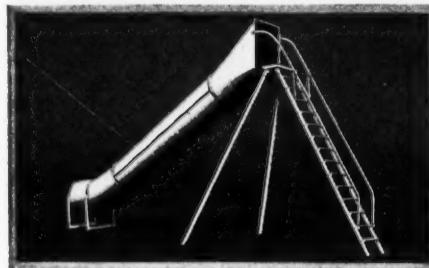
1. The plans and purposes of the Cicero Teacher's Welfare Association, as set forth by President Marcia W. Dill, aim "to inculcate the spirit of charity, justice, and fidelity; to promote its welfare and enhance the happiness of its members; to quicken the spirit of American patriotism; constitute good fellowship; to perpetuate itself as a social and benevolent association, and to foster a spirit of friendship between the employees and board members.



TRAVELARC No. 247



WOBBLER No. 218



TUNNEL SLIDE No. 487

Three New Numbers By The FUN-FUL People

Buying for Permanency-- Means buying the FUN-FUL line. Means continued economy. Means greater safety for those children under your supervision.

Building for Permanency-- Assures the Hill-Standard Co. of your continued good will. Moulds your confidence in our products. Makes it possible for an ever broadening line; continual announcements of new numbers.

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an ironclad guarantee of satisfaction. Manufacturing knowledge of more than three decades, combined with engineering pioneering of more than a half century, bring to you FIRST the very best for the playground.

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TO
PLAY

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HILL-STANDARD CO.
ESTABLISHED 1900
ANDERSON INDIANA, U.S.A.

IT
PAYS
TO
PLAY

2. To propose and discuss matters pertinent to the betterment of the service.
3. To promote coöperation between members and employees of the board of education.
4. To promote efficiency in all the branches of the service.
5. To create a fund by the assessment of dues which shall be used for the purposes of the association.
6. To aid a member in time of illness or distress, where such aid is appropriate, necessary, or advisable in the judgment of the officers and directors.
7. To promote social activities which may weld together its members.

The Cicero Teacher's Welfare association is now functioning in its fourth year. The body of control is known as the board of directors, composed of six members taken from the principal's and supervisor's staff: one representative from each of the schools, in addition to the regular officers, and past presidents who are regular ex officio members.

The more immediate objectives are to promote coöperation between members and employees of the board of education; promote efficiency in all the branches of the service, and promote social activities designed to stimulate friendship. The principal object, however, of the organization is to render aid to its members in time of illness and distress.

President Frank J. Petru, of the board of education, has been a warm supporter of the association who secured a state charter for the same. The control of the organization is in the hands of a board of directors composed of six members representative of the several schools.

Membership in the association is limited to all persons holding teaching positions whether in position of teacher, principal, supervisor, or superintendent, and persons serving administra-

tive offices. Board members, attorney, and trustee are considered honorary members.

The activities of the association for the year are carried out by various committees:

1. The Hospital and Sick Benefit Committee arranges with a hospital for care of members at a reduced rate. Often the member bears none of the expense. A member absent from school for more than two weeks, is permitted to draw upon the Association for sick benefit.

2. The Welfare Committee keeps in touch with all members who become ill. Flowers are sent in case of illness or death in the family of the member. This eliminates individual collections.

3. The Social Committee arranges for the social events of the Association. Two banquets and dances have been held each year for the members and their friends. These events have provided excellent opportunities for members to become better acquainted with one another.

4. Using their group buying power, the Way and Means Committee has secured a large list of firms who will give discounts to members of the Association. Often these discounts permit a member to buy at wholesale prices.

5. The Loan Committee will make loans to members, who have the privilege of paying back loans in monthly installments thus eliminating the danger of the loan shark and his pernicious activities.

6. The Bulletin Committee publishes a monthly magazine which serves to acquaint members with the news of our group. Board members serve as reporters.

7. The Fellowship Committee arranges for various excursions and trips which any member is privileged to join. In this instance each member pays her own expenses.

8. The Educational Committee arranges for professional lectures to give addresses to the teaching body.

Superintendent or Politician?

By Dorward D. Lindsey

The morning session of our sectional teachers meeting had just come to a close, and I was walking slowly up the aisle, looking for familiar faces, when I felt a tap on my shoulder. Turning, I recognized my genial classmate of a summer-school session of three years past.

"Well, where are you now?" he asked. "Still at the same place?"

"Yes," I replied, "and you, are you still at Proctor?"

"Well," said my friend, "I am just there, and that's all. You see, we had a big school fight down my way, and I had quite a bit of trouble putting in my board. Some of the younger set

in the town thought that we needed one of these college wonders to take my place — someone, you know, to give the youngsters these new-fangled tests, encourage parent-teacher associations, teach the little girls dancing, and what not. But Brant, those fellows don't know a thing about practical politics. I picked a board of good fellows and we then worked up an organization and a plan of action that would be hard to beat."

"First thing, you know, I had the teachers do some missionary work with their friends and neighbors. Then, the day before election, I car-

(Concluded on Page 124)



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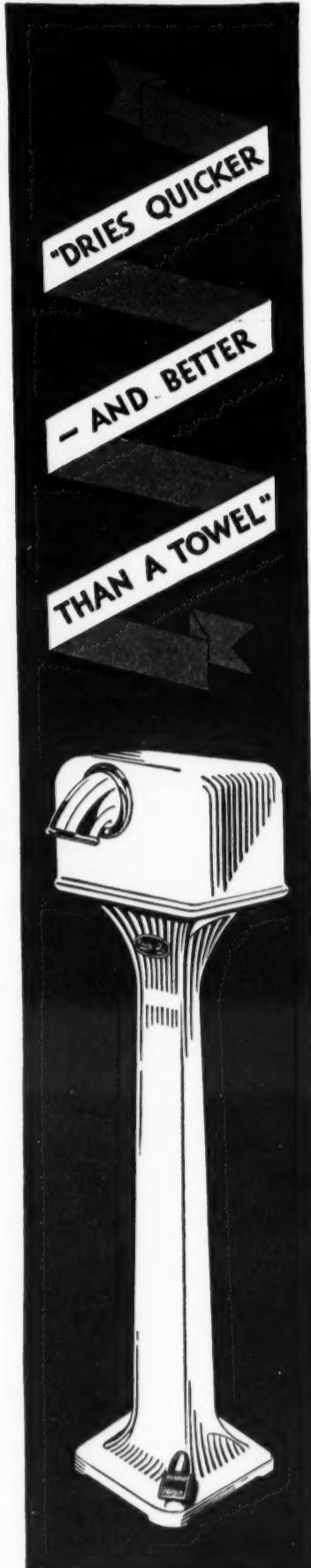
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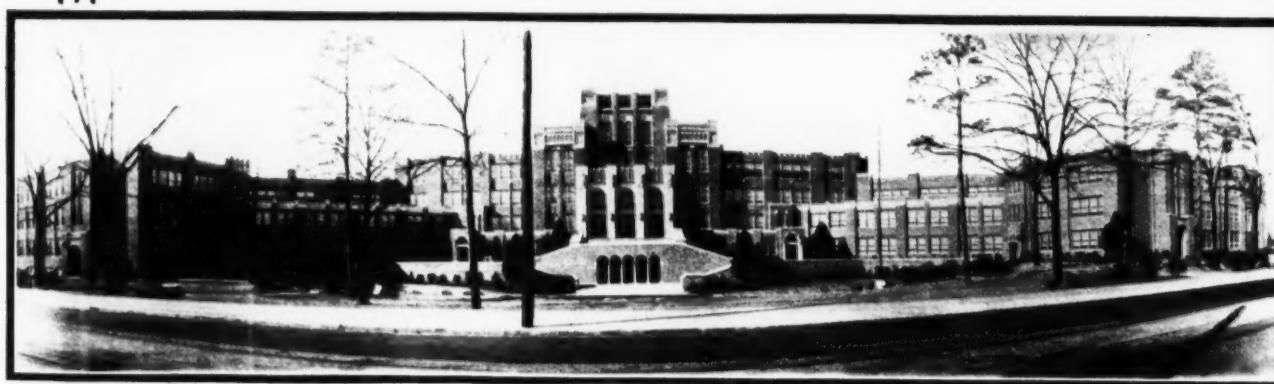
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BRADLEY WASHFOUNTAINS

(Concluded from Page 122)

ried the fight into every home. I gave the boys and girls a day's vacation. Some of my board said afterwards that this was the best thing of all. You see, lots of the boys and girls went home and told their parents what a fine guy I was."

We passed from the building to the street, and as we waited for a street car, I asked, "Why the vacation? Was there an epidemic of some kind?"

"Oh, don't you understand?" he returned. "The teachers all *had* to campaign for their board of education — three new members were elected."

"Their board?" I asked. "I thought it was your board?"

By this time a look, first of irritation, then of incredulity, came over his face.

"Do you mean to tell me that *you* don't put up a board of education in your section?" he asked.

"Never," I replied. "There were three new members elected to our board this fall, but I hardly knew them. You see, one of our old members retired from public life, and the other two ran, but were defeated, due, I believe, to the fact that most of our county went Democratic, and they went out with the others in office. I have met with the new men three times, and, outside of a change of policy regarding bus transportation to which I did not wholly agree at the time, our relations have been most cordial. In fact, at the meeting last Monday, when all were present, satisfaction was expressed regarding my work and I was offered an increase in salary and another three-year contract."

My friend looked at me curiously, and then— "Well, you are new at the game, but you ran a big risk when you let some of the town busy-bodies pick a board for you. I don't take

chances like that, and you won't, after you have been in the school business as long as I."

"Well, I don't know," I returned, feeling that I was either rather unsophisticated, or at least uninformed, regarding the question of holding a position. "I always thought that if I did good work, and kept myself alive professionally, I would get along without any great difficulty. Of course, I know that teachers can wear themselves out in a community after a time, but I have always thought that any ordinary board, excluding one that might spring up as a result of a building fight or some similar community disagreement, would rather honestly consider fitness and one's work."

"Listen, Brant," said my now thoroughly aroused friend. "I have held my present position for fifteen years. I never attended college but one year and six weeks in my life. When I finished high school, I started to take an A.B. course, but left at the end of the first year because Uncle John, down at Highbanks, offered me a position in a rural school."

"Three years ago, my girl wanted to take a summer course, and I went with her, more to be with her than to attend classes. I loaded up on a lot of bunk about intelligence tests, guidance, child accounting, and what not, but take it from me, give me the opposite end of a good switch once in a while, and I can 'account' and 'guide' all that is necessary."

"Oh, of course, we do have one of these college boys down in my town for principal, and he has been trying out some of the half-baked ideas, some of them not half bad, I admit. But he is killing himself with the teachers, let me tell you. The youngsters, though, they rather like the boy, but, at any rate, as I told the board the other night, we had better get rid of him, before he decides we are all morans, or morons, or whatever the word is. They agreed with me, too."



Bradley Washfountains have hard, granite-like or marble bowls which are low enough even for children to wash comfortably in the full, central spray. Bradleys are practically indestructible and require minimum janitor attention. The sprayhead may easily be removed for occasional cleaning, if necessary, while the patented central drain keeps the bowl flushed free of suds and standing water. Bradleys always look well—never lose their hard, lustrous finish. And they cost only half as much to install as individual washroom equipment!

He chuckled. "Why shouldn't they? I picked 'em."

HIGH SCHOOLS ARE "COMMON SCHOOLS" IN MONTANA

An interesting school-bond case, involving the issuance of bonds to the amount of \$265,000 for high-school purposes, was decided by the Supreme Court of Montana during the March, 1930, term.

In November, 1929, Dawson county, voted the bond issue with a liberal majority. The bond issue was attacked by a citizen who urged as reasons that the transaction was invalid (1) that the question had not been submitted to the voter with sufficient clearness and (2) that the bond issue went beyond the tax limitation set by law. The complainant further contended that the bond issue was submitted to the "electors of the country instead of to the taxpayers" as required by chapter 29, laws of 1929. The claim was also made that the term "common schools" used in the law narrowed down possible bonds to grade schools, and therefore did not include high schools.

The court ruled the bond-election call was sufficiently explicit to enable the voter to cast his ballot with intelligence, that the bond issue did not exceed the debt limit, that the terms "electors" and "taxpayers" were essentially the same, and the term "common schools" was sufficiently broad to include the high schools. The decision, therefore, was in favor of the defendants.

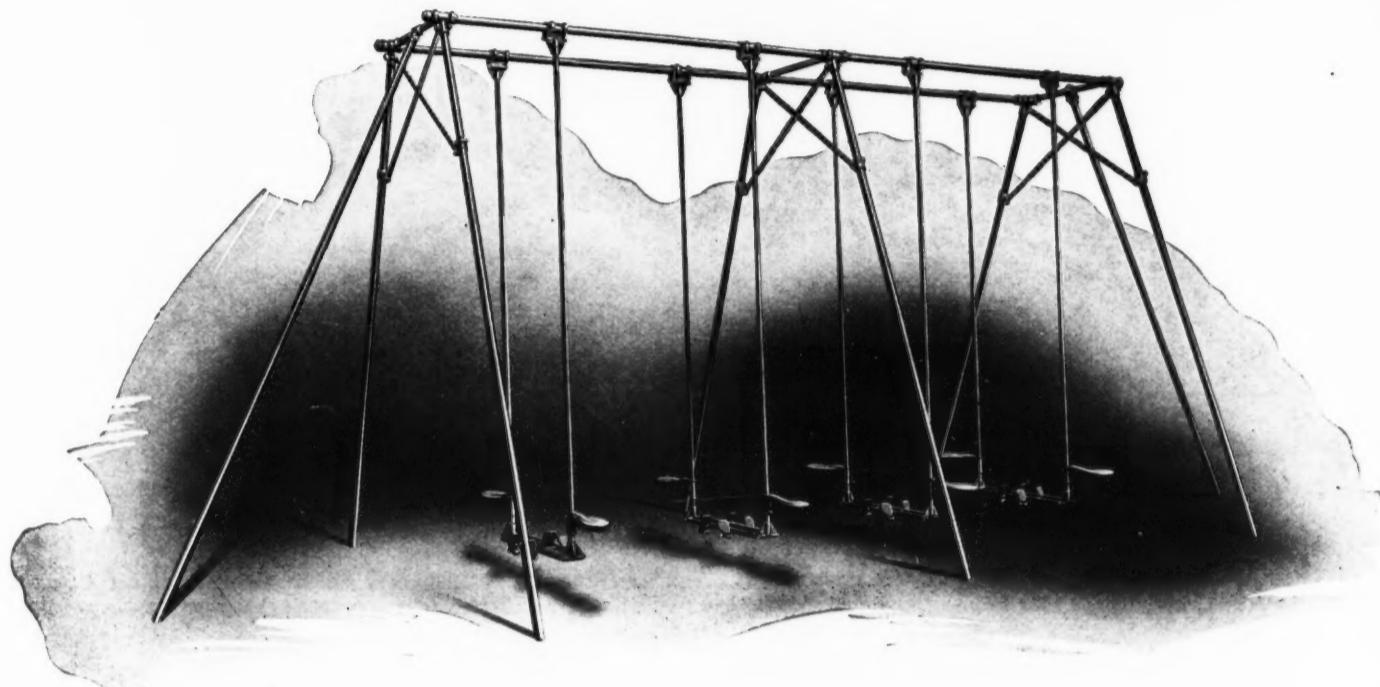
Dawson county will proceed to the building of a county high school at a cost of \$225,000, to be located at Glendive. Mr. J. G. Link, of Billings, Montana, has been chosen as architect. The bonds, which bear an interest rate of 5 per cent and run 20 years, were purchased by the state land commission.

—MR. J. H. MORRISON has resigned as superintendent of schools at Cairo.

—MR. JOHN R. WALTON, 73, died at his home in Perrysville, Ohio, on April 9, following a long illness. Mr. Walton was formerly head of the school systems of West Lafayette, Lucas, Westerville, Grafton, and other places. He retired from active service a number of years ago.



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The Service Department conducted for your convenience will gladly make suggestions and aid in the planning of space utilization. A rough sketch of the floor plans will bring their recommendations free of charge and without obligation on your part.

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The Wisconsin School-Board Convention

When the Wisconsin School-Board Association gathered for its tenth annual meeting at Racine, April 11 and 12, more than eighty communities were represented. There were general sessions and sectional meetings. The former were held in conjunction with the Wisconsin City Superintendents' Association. These were addressed by J. M. McConnell, State Commissioner of Education of Minnesota, and Prof. John Guy Fowlkes, of the University of Wisconsin. Lewis Powell, of Kenosha, presided.

Mr. Gilbert Brach, member of the Racine board of education, extended words of welcome and presented a handsome gavel on behalf of the Racine Association of Commerce. Mr. H. H. Smith, of New Richmond, paid tribute to the late William Luening, for many years president of the La Crosse board of education and an officer of the Wisconsin School-Board Association.

Problem of the Northwest

J. M. McConnell urged that the problem of public education in the Northwest involved a system that shall be economical and highly efficient, and affords an equal educational opportunity for every child. It demands a broader, more scientific and cultural knowledge. The economic and industrial interests call for greater attention to vocational training. The unemployment situation must be met through vocational adaptability. One of the factors of the modern problem is education for leisure. Equal educational opportunity must be qualified by enabling the individual to secure that training best suited to serve him.

Minnesota, said the speaker, maintains 7,000 one-room rural schools. About 45 per cent of these have an average attendance of less than ten pupils. These one-room schools are neither as economical nor efficient as they ought to be. McConnell contended that education will not cost less in the future than it has in the past. The real problem is to spend money more wisely. Where is the money to come from? When a well runs dry it is abandoned, and a new well must be sought. When

sources of taxation become exhausted, new tax sources must be discovered. The Federal Government should use its taxing powers to raise money for the schools.

City Councils and School Boards

Prof. John Guy Fowlkes, of the University of Wisconsin, defined the function of the modern board of education and that of the city council. The one deals with the schools, the other with the general welfare of the community. The relations between city councils and school boards involve budgets, the selection of sites, and the construction of school buildings. While the care of the schools is the function of the state, it remains that local taxation must support them. In summarizing his conclusions, Prof. Fowlkes urged the following:

1. The board of education should enjoy complete fiscal autonomy. The dependence upon city-council approval on financial matters leads to irritation and embarrassment.

2. The setting up of a continuing appropriation for operation and maintenance is expedient in that it assures stability and harmony.

3. There must be a recognition of relative needs of local government and agreement as to the share which can consistently be claimed for the schools in the light of these needs.

Value of School Budgets

Dr. W. W. Kelly, president of the board of education of Green Bay, discussed the subject of budgetmaking and the handling of school supplies. His appearance on this subject at this time proved of exceptional interest, inasmuch as the Green Bay board of education had just gone through a crisis which landed the superintendent of schools into prison. Loose methods in the matter of school supplies caused the trouble. Now the subject is under systematic control.

In securing control over the handling of supplies, Dr. Kelly held that a complete inventory is the first essential. Nothing must be given out except on requisition. Supplies furnished should be listed in duplicate slips—one for the records of the

school the other for the main office. All receipts should have a copy of the bill attached. Someone must audit the bills. A monthly audit should be made. It costs no more than an annual audit. The average school superintendent, Dr. Kelly contended, "has no business experience, and ought not to be burdened with financial matters. I know no type of men less competent in matters of business than the professional men."

Mrs. S. J. Pentler, member of the Wausau board of education, discussed the problem of moral training in the schools. She believed that the difference between right and wrong should be stressed by every parent and every teacher.

The following officers were elected: President Dr. F. T. Clark, Waupun; vice-president, V. A. Lundgren, Marinette; second vice-president, Martin Halvorsen, Sheboygan; secretary, Mrs. Sadie Strouse, Arcadia. H. H. Smith, of New Richmond; Miss Gertrude Sherman, Milwaukee; and Mrs. Clara Dvorak Mussoda were reelected members of the board of directors. S. O. Prentiss was elected to succeed W. A. Taage, of Wausau.

—Minneapolis, Minn. Upon the suggestion of the central labor union, the school board has voted to insert a clause in future school-building specifications, requiring that the contractors be residents and taxpayers of Minneapolis.

—The school board of Centralia, Ill., has authorized the principal of the high school, Mr. O. M. Corbell, to carry out a program of redecorating and lighting in three of the oldest buildings of the school plant, and the remodeling and re-equipment of the high-school cafeteria. During the past year, the school board installed a flood-lighting system on the high-school athletic field.

—The New York City board of education has begun the preparation of new regulations governing the advancement of principals from one level of their salary schedule to another. The regulations require that principals seeking advancement from one salary level to a higher one, shall have served a given number of years on the level from which they seek promotion.

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NORWEST Double-Tier Lockers in the Jordan High School, Salt Lake City, Utah

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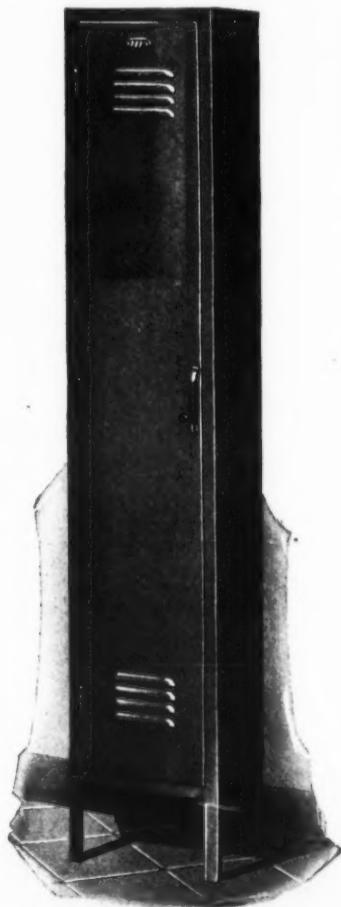
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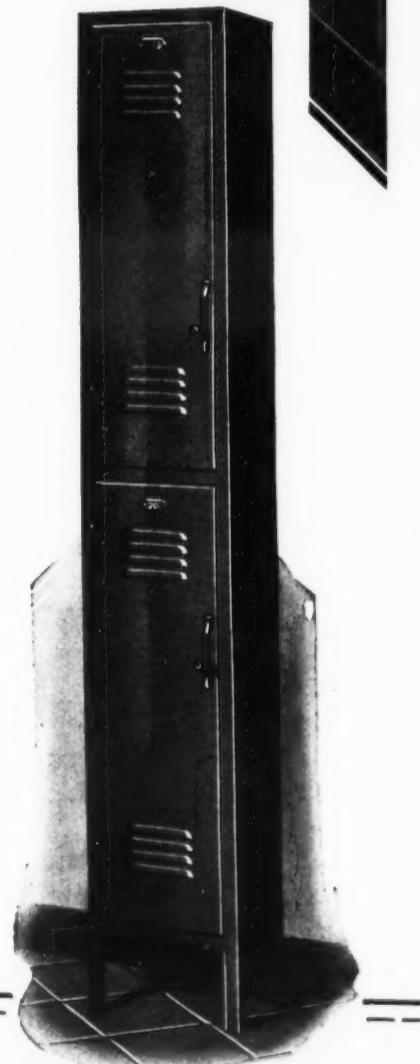
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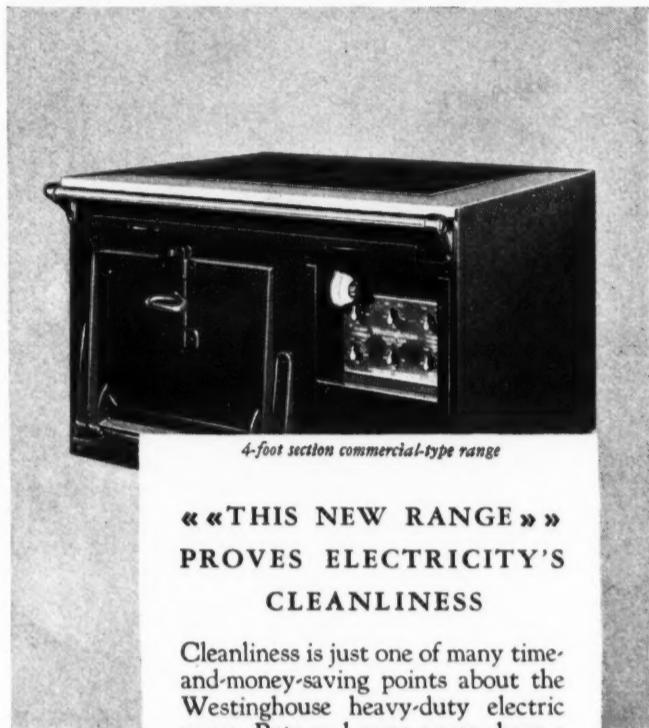
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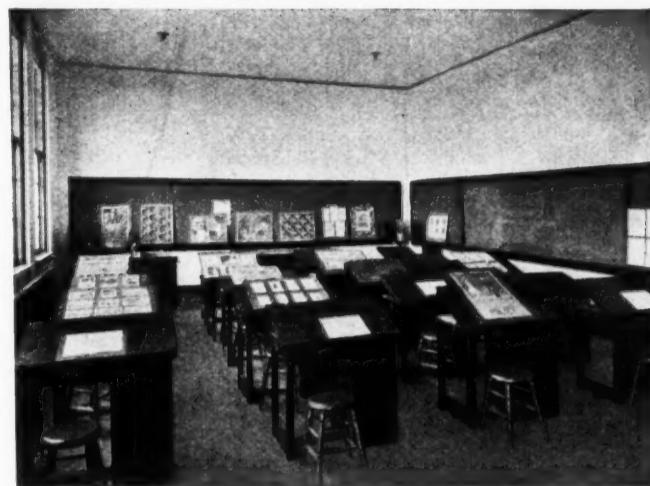
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The classroom at the right accommodates 60 students every school day in the year with the very minimum of lost time. Each table provides room adequate for three student-drawing boards and individual drawer space. By having lockers within the table a great amount of time is saved in the opening and closing of classes. With Sheldon art tables the assembly of a class is a problem of a few seconds instead of many minutes.



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E. H. SHELDON & COMPANY, Muskegon, Mich.

Laboratory Furniture Specialists for 30 Years

THE TECHNIQUE OF VISITATION AND CONFERENCE WITH TEACHERS

(Concluded from Page 49)

preliminary preparation both by the supervisor and the teacher. It then becomes a co-operative project by a committee of two to meet a particular situation. This type of conference is very valuable and should be much used.

It is the first type of conference, the one which follows visitation and is based on observations made while visiting, that is at once the most difficult and potentially the most valuable. The pre-teaching conference necessarily deals with theory, with something which hasn't happened and may not happen. The post-teaching conference is based primarily on facts, on actual happenings. The technique of the supervisor in the post-teaching conference should include the following points:

1. The first essential is friendship between the supervisor and the teacher, together with the conviction on the part of the teacher that the supervisor both genuinely desires and is expertly able to be of real assistance.
2. The attitude of the supervisor during a conference should be calm, impersonal, and scientific.
3. The supervisor should first commend whatever was genuinely commendable in the work observed.
4. Only one fault should be discussed at any one conference.
5. The conference should be carefully planned beforehand.
6. The supervisor should be prepared to point out the educational principles involved.
7. The conference should be directed toward planning for ensuing class periods.
8. Early in the conference and throughout, it is desirable to get a frank and full expression of the teacher's point of view. The conference is not successful if it is a monologue by the supervisor.
9. Adverse criticism must be so connected with helpful suggestions that its unpleasantness will be more than compensated for by the value received.
10. Such criticism must not be given in general terms, but must be specific, exact, and directly helpful.
11. An adverse criticism should never be made, except as it is accompanied by the suggestion of a better procedure.
12. Suggestion should be used rather than direction.
13. No criticism is ever justified which does not leave the teacher encouraged to try to improve her teaching.
14. The supervisor should freely acknowledge to himself and to the teacher that the problem under consideration is in part his problem and that he willingly assumes a part of the responsibility for its solution.

As an aid to supervisors the accompanying "Supervisors' Visitation Check List" has been

prepared. The word "supervisors," is used in the generic sense as including principals, who are the chief supervisors with whom teachers come in contact.

Supervisors' Visitation Check List

- I. Preparation:
 1. Is my relationship with teachers on a friendly and democratic basis?
 2. Has my visitation a definite objective, arrived at in co-operation with teachers?
 3. Have my teachers and I co-operatively investigated the best practices in the field of the objective?
 4. Have my teachers and I co-operatively formulated a definite plan to improve the teaching?
 5. Have my teachers and I in co-operation agreed upon the basic principles underlying the desired improvement?
- II. Observation:
 1. Do I inspect classrooms, realizing clearly that inspection is of limited value as an instrument of supervision?
 2. Are my first supervisory visits made to teachers who are inexperienced, weak, or new to the system?
 3. Are my supervisory visits, except by invitation, definitely scheduled and announced in advance?
 4. Do I enter a classroom with a minimum of disturbance?
 5. Do I take an inconspicuous position in the room?
 6. Am I alertly interested and attentive to what goes on?
 7. Do I refrain from breaking in on the work, unless invited or given permission?
 8. Do I consciously try to analyze the chief strength and weakness of the work?
 9. Do I make careful and detailed notes, using a check list?
 10. Do I visit ordinarily for entire periods?
- III. Conference:
 1. Do I build my conferences on thorough analysis and basic educational principles?
 2. Do I keep my conferences on the professional plane, carefully avoiding any tendency toward personalities?
 3. Do I make use of preteaching conferences?
 4. Do I use the conference, as occasion requires, to build up the morale of teachers?
 5. Have I a friendly and democratic relationship with my teachers?
 6. Do I maintain a calm, impersonal, and professional attitude?
 7. Do I first commend heartily whatever is commendable?
 8. Do I discuss only one or two faults at any one time?
 9. Do I plan carefully beforehand for the conference?
 10. Do I organize my visitation notes in such a way as to illustrate just what the defects are?
 11. Do I point out the bearing of mutually understood and accepted educational principles to the situation?
 12. Do I help the teacher plan for ensuing class periods?
 13. Do I encourage the teacher to express her point of view fully?
 14. Do I hold the conference before school begins?
 15. Do I hold the conference in the teacher's room?
 16. Is my criticism definitely helpful and constructive?
 17. Do I avoid criticizing a teacher in word or manner in the presence of pupils?
 18. Do I give favorable comment informally at the time of visitation if opportunity offers?
 19. Do I use suggestions and questions, rather than dogmatic statements?
 20. Do I leave the teacher encouraged to try to improve her teaching?
 21. Do I freely accept partial responsibility for the teaching?
 22. Do I make the conference forward-looking?

TULSA'S CONTINUING STUDY OF SCHOOLHOUSING

(Concluded from Page 48)

for future flexibility in room layouts and at the same time, give the best arrangement and equipment for our curriculum as now operating. Curriculum changes in some buildings will hold more pupils in school and these must be taken into account. Offerings of rather specialized types will shunt certain pupils from one school to another in addition to keeping more pupils in school.

We construct our buildings from the classrooms up, based fundamentally on the needs of the pupils and the teachers for efficient learning conditions. After tentative floor plans have been worked out by teachers and have been approved by the principal, the research department, and the assistant superintendent, they are then checked by the business manager's office and by the superintendent of schools with the board of education. From this point, the architect assumes major responsibility, modifying and making necessary architectural changes to give beauty, utility, safety, symmetry and economy, he in turn checking proposed changes with those on the educational staff responsible for the original layout.

We are also co-operating with the city park commission with the hope that we can locate buildings near or adjacent to city parks so that play and other facilities may be somewhat supplementary. Each will also enhance the utility and beauty of the other.

We have not enumerated many factors which might be studied and some which we will probably need to consider between now and the time for our bond issue. We have listed those most potent in our practical situation here in Tulsa and hope that these suggestions may be of use to others in efficient schoolhouse planning.

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A complete line designed and constructed to meet every school requirement



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Drawing, Study, Writing, etc.

Sjöström equipment is attractive in design, well finished and built to give years of service.

Our furniture and equipment is installed in hundreds of schools and colleges, and we solicit an opportunity of furnishing your requirements for Art, Cafeteria, Drawing, Laboratory, Library and Shop furniture.

Catalog furnished on request.

*Send us your specifications for estimate
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1715 North 10th Street, Philadelphia, Pa.

THE SUPERINTENDENT'S MONTHLY REPORT TO THE SCHOOL BOARD—I

(Concluded from Page 50)

That salary schedules are not stable, or are unsatisfactory, may be concluded from the frequency with which they are discussed.

The fact that only about one half of the superintendents give monthly financial statements, shows that they are not as familiar with school income, expenditure, and bank balance as one would expect them to be. The same thing can be said of insurance, for we find but slightly over one fourth of the oral reports mentioning this subject.

In almost all schools projects costing over \$500 are common, and must be advertised for bids, yet only about two fifths of the reports include information on bids advertised or received.

The occasion for the expenditure of petty cash arises in every school and whether the money is supplied beforehand by the board, or taken from the superintendent's pocket, it is very important that an accurate monthly accounting, with receipts covering each expenditure, be made to the board.

It is likewise essential that the board and the superintendent keep themselves constantly informed on the situation with reference to the sinking fund. It happens not infrequently that an election must be held for the refunding of outstanding indebtedness. The expense, delay, impairment of credit, and embarrassment incident to this procedure, can be forestalled only by constant vigilance in keeping the sinking fund up to the requirement for meeting these obligations as they fall due. This vigilance will be exercised only when those in charge are adequately informed. The board report may well be an instrument for impressing the board with the extent of its obligations. Whether the indebted-

ness is in the form of sinking-fund bonds, or a state loan, information on the debt situation should always be available in order that the board may protect itself against irregularities, which in the case of a state loan might occur in the county auditor's office.

Although school indebtedness occurs commonly, yet only 27 to 29 per cent of the superintendents report on the matter.

IS AN ALL-YEAR PLAYGROUND SURFACE POSSIBLE?

(Concluded from Page 54)

hot oil. The surface is immediately rolled with a 400-pound roller, to force as much sawdust into the oil as possible.

It is important that the spreading of the sawdust and the rolling be done immediately, while the oil is still hot, because only then will the dust be forced into the hot oil.

The contract price for this surfacing has amounted to about 5½ cents per square foot.

The Advantages of the Santa Monica Cushion Surface

The head of the physical education department of the Santa Monica schools has reported that, since using this method of surfacing, there have been fewer injuries to the school children; the parents have reported less wear and tear on the shoes and clothing; and the cost of medical supplies and playground balls has decreased at least 50 per cent.

The surface offers the following advantages: The top surface gives it the appearance and feel of a cork carpet, which reduces the wear on shoes and playground balls to a minimum. It does not severely injure a player in falling. It is firm, but not hard; it gives the correct amount of resiliency; it prevents "that tired feeling" on feet and legs after playing; it gives a firm foothold, with no slipping; it gives an accurate and uniform bounce to the ball; it is ready for use

all the year round. There is no mud during the rainy season or dust in the dry season; its surface does not wash in winter or summer; lines to indicate the boundaries may be easily painted on the surface; there is no forced closing of the ground after a rain or during the winter; and there is no further need of sprinkling, dragging, or rolling of the court.

Another advantage is the fact that the top coat of oil and sawdust may be successfully applied on the top of any other hard surface. An application was made to grounds previously surfaced with rock and oil, at a cost of slightly less than ¾ cents per square foot, and the result has proved entirely satisfactory.

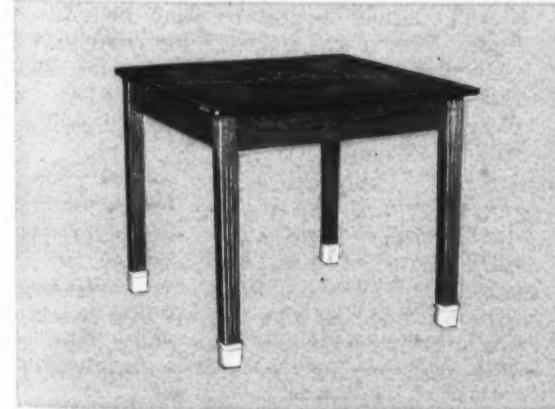
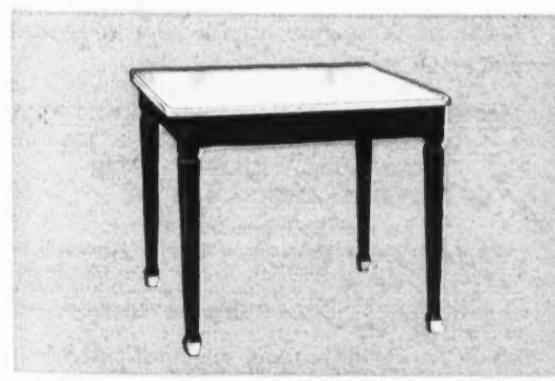
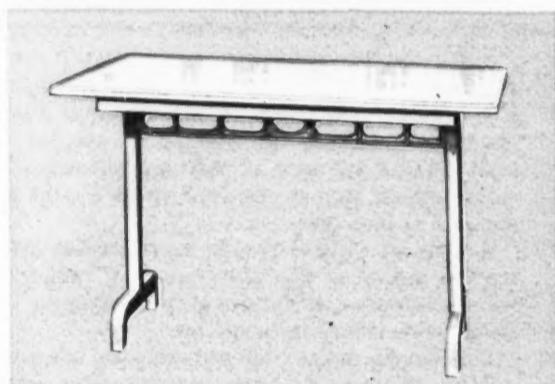
The problem now confronting the Santa Monica school authorities is: Shall the entire playground of each school be surfaced with this cushion method? The physical education department has objected to the surfacing of the baseball diamonds for the reason that the boys prefer to play on dirt diamonds. If the school authorities come to an agreement and allow the surfacing of the entire grounds in this manner, it is certain that the cost of playground upkeep will be considerably reduced.

The Santa Monica school officials will be glad to send a copy of their specifications to any school official or playground director who contemplates a study of the problem of playground surfacing.

News of School Officials

—The school board of Lansford, Pa., has reorganized for the year, with the election of Mr. H. W. LAUER as president; Mr. GILES HELPS as vice-president; Mr. LOUIS RIEBE as secretary; and Mr. W. H. SCHLICK as treasurer.

—Mr. G. C. COURTNEY, Mr. S. S. JENNINGS, and Mr. A. G. FOARD have been reelected to serve another three-year term on the school board of Lenoir City, N. C. Mr. Courtney was elected as chairman of the board.



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School service is *strenuous* service, and cafeteria counters and tables must be built with utmost care if they are to stand up under school use. Sani Counters and Tables have years and years of usefulness built right into them by men who know what school service means. That's why they cost less than any other equipment in the long run.

Whether your requirements call for one or more of our iron or wood base tables shown here, or a complete installation of these and our matchless Sani Counters, you will find Sani Equipment best suited to your needs. If you haven't already received a copy of our complete catalog, by all means mail the coupon for it today so that you may have this valuable reference book instantly available.

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Sales Organization of
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NEW YORK

**A HIGH-SCHOOL-ACTIVITIES
FINANCE PLAN**

(Concluded from Page 66)

Cost of Maintaining the Activities Fund

The cost of operating the activities fund comes out of the interest earned on the surplus of the fund not in the checking account. Thus far, our cost for the four years, deducting from expenditures the inventory value of supplies on hand, has been less than \$25, while the total interest income has amounted to over \$150. Few individual activity funds are continuously large enough to be deposited at interest with any certainty, and still fewer are so deposited; but in the aggregate the inactive surplus is worth considering. Until recently we have been hoarding our interest to be spent for supplies, but soon we shall have to make some decision on the disposal of the surplus, and how to do it. If paying interest to our depositors is the answer, the arrangement will probably be made by the head banker. That is one of the problems which makes his job interesting.

SOMETHING ABOUT THE ALL-YEAR SCHOOL

(Concluded from Page 67)

hazards of streets, available funds, pupil retardation, pupil acceleration, normal progress, foreign pupils, increase of music, increase of manual training, increase of artwork, increase of play, can be modified from time to time as occasion demands without upsetting the work of New York's army of children during the rest of the school year."

THE SCHOOL PLANT: THE COST OF MAINTENANCE

(Concluded from Page 68)

St. Louis, Mo.	8.12
New York, N. Y.	3.27
Cleveland, Ohio	6.87

Philadelphia, Pa.	3.93
Pittsburgh, Pa.	5.04

In 47 cities having a population between 100,000 and 500,000, the cost for maintenance per pupil in average daily attendance in full-time day schools, for the school year 1928-29, ranges from \$1.17 in Fort Worth to \$13.59 in Milwaukee.

The percentage of maintenance costs to total current expenses in these same 47 cities ranges from 1.58 in Fort Worth to 11.69 in Milwaukee.

The reports on 134 cities having a population from 30,000 to 100,000 show similar striking differences in maintenance costs. For these 134 cities the cost for maintenance per pupil in average daily attendance in full-time day schools ranges from \$.71 in Wichita Falls, Texas, to \$11.61 in New Rochelle, New York. The average for the 134 cities is \$4.24.

The figures just presented show again either that the accounting practices in our cities differ widely, or that the policies governing appropriations for maintenance are far from standardized.

Conclusions

The conclusions which may be drawn from a study of the figures on maintenance costs are summarized as follows:

1. In cost accounting there should be careful segregation of capital outlay from revenue and expenses for maintenance only.

2. In addition to providing for incidental and casual expenses for maintenance, there should be a definite maintenance program for work over a period of years. For example, at regularly recurring intervals, provision should be made for exterior painting, interior painting and cleaning, and for the repairing of roofs. A well-planned program takes the several buildings in a city in a definitely organized sequence.

3. There should be further research for the purpose of determining the proper percentage

of the total valuation of buildings and grounds that should be devoted to maintenance. From the best available information at present it seems that 1 per cent of the total valuation is the minimum annual per cent which should be devoted to that purpose.

4. Careful studies should be made concerning the optimum life expectancy of buildings for the purpose of securing the maximum of economy in school construction.

The whole subject of maintenance costs is worthy of extensive research, because wise maintenance policies means large savings in tax levies, while unwise policies leads to extravagance and waste.

SCHOOL BUSINESS ADMINISTRATION—ARCHITECTURAL DESIGN, PLANS, AND SPECIFICATIONS

(Continued from Page 69)

Standardized classroom dimensions enable the architect to prepare plans with great uniformity of form work and structural parts, such as columns, beams, window openings, etc., and thereby reduces the cost of the construction. Can such standardization be adopted?

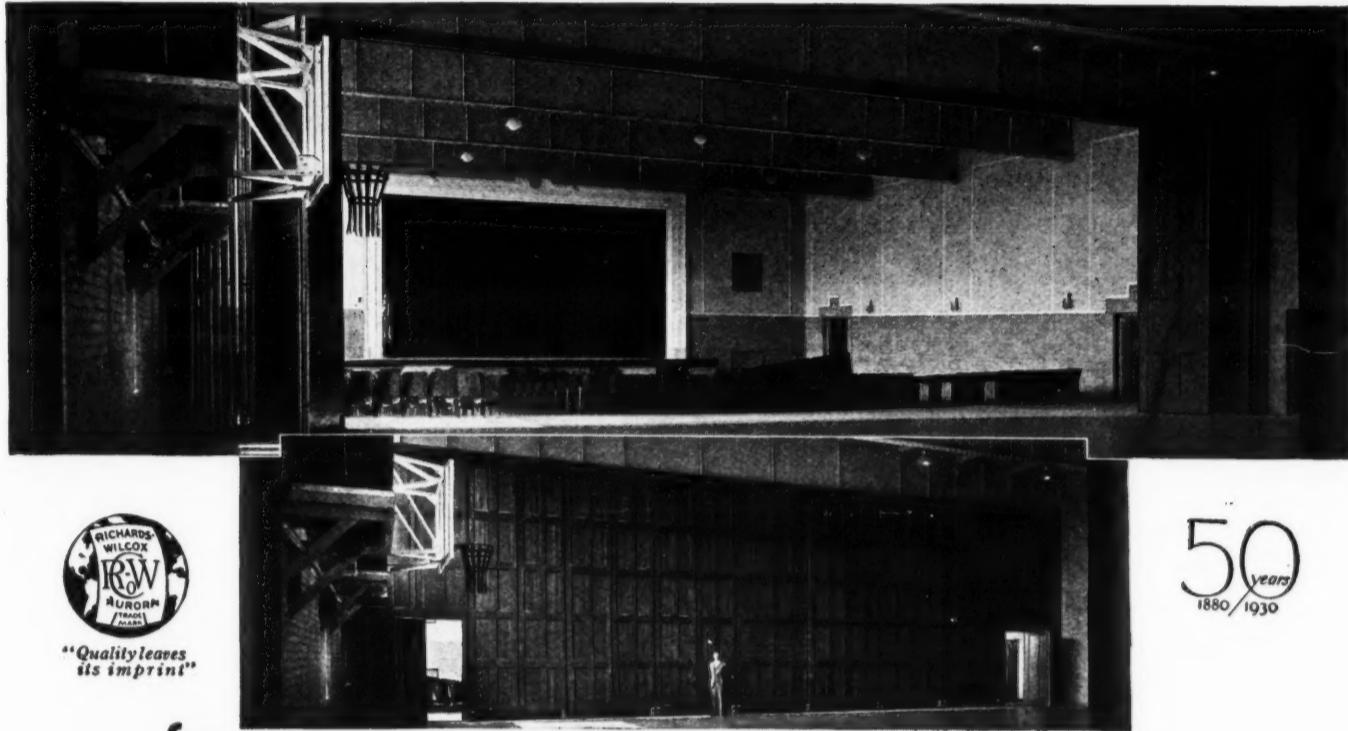
14. What Shall the Stair Specifications Be?

Exhaustive experiments with stairs have proved that a difference of 1 in. in the height of a stair riser makes a tremendous difference in the efforts on the part of a child to climb them. A wide tread of 10 in. in width with a low riser of 6 in. has been found exceptionally easy for children to climb.

The width of stairs has been the subject of much argument. The primary thing to consider in connection with stairs is the hazard presented when they are used by the children for quickly leaving the building. When thus considered, every child should have the aid of a handrail. Why, then, should stairs be wider than the width necessary for two children when walking

(Continued on Page 134)

NO OPENING TOO HIGH NONE TOO WIDE



"Quality leaves its imprint."



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FoldeR-Way partition doors

With FoldeR-Way, whole walls disappear and reappear, with practically no effort and no noise. Idle floor space is utilized; not a foot of it need be wasted with R-W equipment.

Here is a typical example, the Junior & Senior High School, Quakertown, Pennsylvania. The doors are 22 feet high, the opening 60 feet wide. Yet one man experiences no difficulty in moving the entire set of 20 doors. There has never been any trouble or costly upkeep connected with this or any other R-W engineered installation.

Let an R-W engineer show you how FoldeR-Way equipment will slide and fold away doors of any size. Write for Catalog No. 43 today.

The beauty and smooth operation of R-W Compound Key Veneered doors are lasting. Sagging, warping, swelling, shrinking are practically eliminated by tongue and groove method of applying veneer. These famous doors are now made exclusively and sold only by R-W for FoldeR-Way partitions.

Write for Catalog No. A-53, illustrating R-W Disappearing Door Wardrobes for the classroom.

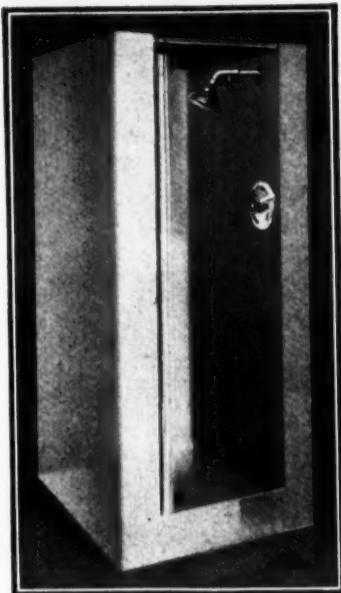


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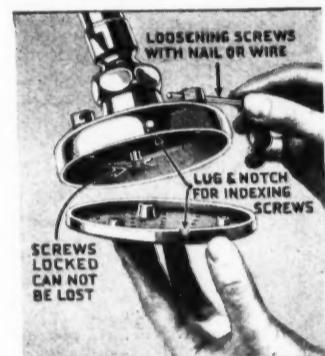
Features of Advantage

The easy-clean shower head, described and pictured here, is exclusively in the Niedecken. The radially drilled shower face, another exclusive feature, gives the usual generous shower spray with the use of less water—a valuable economy. The one lever, temperature controlled Niedecken shower mixer is another advantage and desirable convenience. The specially designed shower stall and base, positively leak-proof for all time, is an unequaled advantage. That is why Niedecken Showers are so universally installed, and why you too should install Niedecken Showers.

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NIEDECKEN EASY CLEAN SHOWER HEAD

Face of shower head completely removed by simply loosening 3 screws. After cleaning, face is replaced—a set of notches guiding for correct placement and alignment as when originally assembled.



(Continued from Page 132)

abreast? This is not more than 3 ft. 6 in. from wall to wall, or 3 ft. 0 in. between handrails.

Wide stairways with handrails in the center have caused considerable confusion to children required to leave a building quickly. On reaching the wide stair landing a sense of confusion strikes the children and the tendency is for them to take the "inside track" thus causing crowding. Pushed back into their proper position, the children on the wall side bump into the end of the center handrail with discomfort and injury as a result.

15. How Many Stories High Shall the School Be?

The present-day trend is to build schools without basements. The former two-story building with a basement was the equivalent in stair flights to a three-story building.

Are buildings three stories above the ground grade objectionable?

A three-story building with 12-ft. ceilings will have two flights of stairs. If risers are 6 in. there will be 48 steps. Is there any objection to any child, boy or girl, being required to climb 48 steps four or five times a day?

What fire hazards, if any, are involved?

16. To What Extent Shall Flexibility in Planning and Construction Be Observed?

To plan and construct a schoolhouse with a capacity far in excess of the actual current needs at the time of erection would be an unwise expenditure of tax funds. Such a procedure would involve wasteful expenditures for the interest on the investment, and for the cost of operation and maintenance on idle cubage.

Care should be taken to plan a building, which may be enlarged by extensions, and modified as to size of rooms, without involving any serious difficulties in the original building plan. This means that the type of construction should be such that, with the exception of the bearing

walls, all the partitions and interior nonbearing walls should be designed to be easily alterable so that room dimensions may be readily changed to meet any change in school organization as to size of rooms that may occur within the life of the school building itself, and to meet any readjustment of space in the original structure if, and when, a new addition is added.

Do not assume that alterations and additions may be made to a building simply on someone's say-so. The plans themselves should clearly show by shadow lines that corridor extensions, room alterations, toilet accommodations, and other facilities can be altered and added, without disrupting and disorganizing the original building.

17. To What Extent Should Extras Be Countenanced in the Construction of a School Building?

A well-prepared set of plans and specifications should result in the construction of a building which will not involve extras or changes in original layout in excess of one fourth of 1 per cent of the total cost of architectural and engineering services, general construction, installation of mechanical and educational equipment, landscaping, and all supervision and inspection service.

Three headings under which the completeness and efficiency of the plans and specifications of a school building may be judged is under construction.

2. Omissions discovered after the building is completed.

3. Quality of the completed work when measured from the following standpoints:

a) Do all parts of the building and its equipment wear well?

b) Are any deficiencies as to poor workmanship and structural omissions due to poor supervision and inspection, and not to poor specifications?

(To be continued)

THE USEFUL UNITS FOR MAKING ANALYSIS OF SCHOOL COSTS

(Concluded from Page 65)

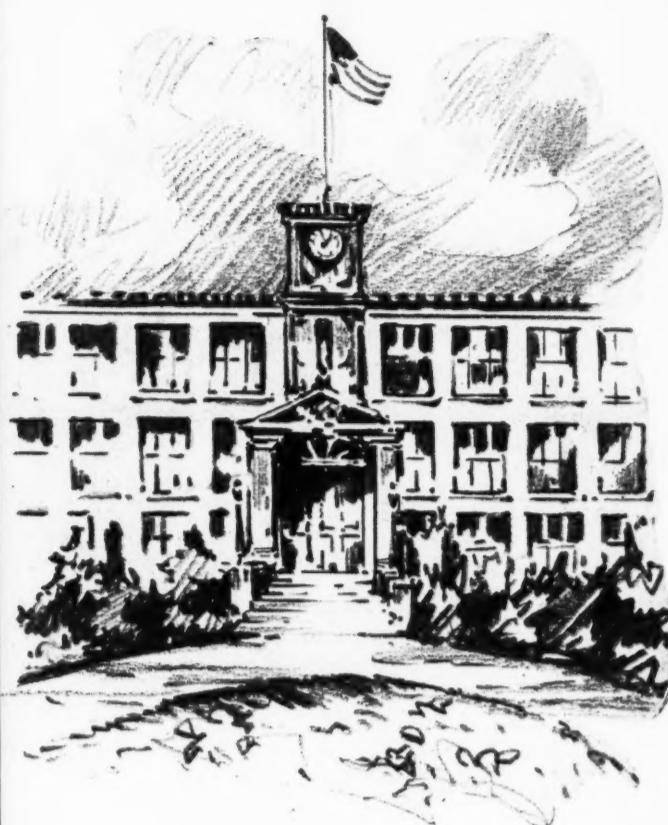
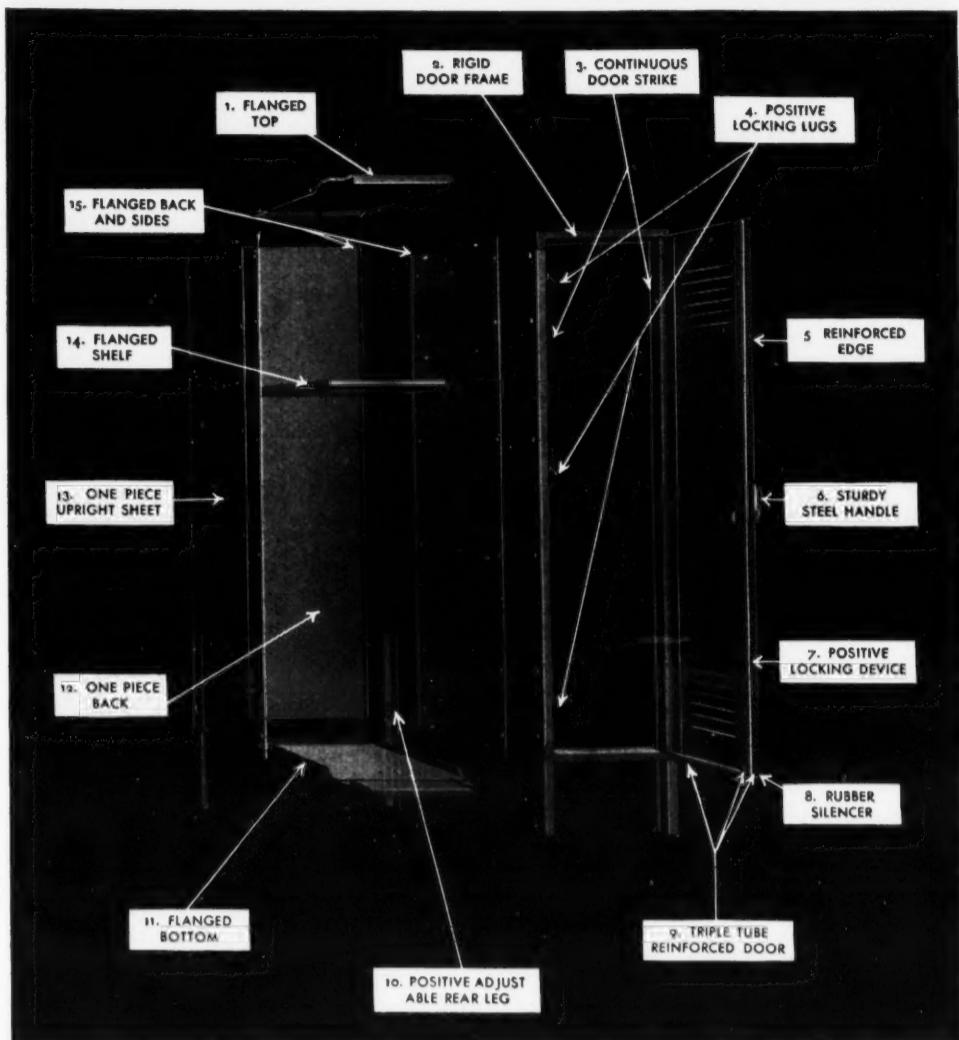
jected to experimental usage by school accountants, business managers, and other students of school costs. Other such units will be devised as attention is directed to the problem.

The general conclusions which seem to be warranted by examinations of numerous cost studies are that any unit used should possess the qualities of validity, reliability, and objectivity; that unit-cost studies to be most significant should be multiple studies in which the results obtained by one specific unit will illuminate the results obtained by applying other units. A cost study should be made for a specific purpose and the results should be interpreted in the light of that purpose. Otherwise, so-called unit-cost studies will only promote confusion. There is not yet any single best denominator to use for making unit-cost analyses of school expenditures.

The North-Central Meeting

—The thirty-fifth annual meeting of the North-central Association of Colleges and Secondary Schools was held March 18-21, at Chicago, Ill. The meeting was attended by a representative group of college executives, high-school inspectors, and secondary-school principals. The enrollment totaled about nine hundred, which was the largest in the history of the association.

The officers elected for the year are as follows: President, Merle Prunty, Tulsa, Okla.; first vice-president, Mr. C. R. Maxwell, University of Wyoming; second vice-president, Mr. G. W. Willett, LaGrange, Ill. The members of the executive committee are Mr. M. E. Haggerty of Minneapolis, Minn.; Mr. W. E. Tower of Chicago, Ill.; and Mr. J. M. Wood, of Columbia, Mo.



Lockers that live as long as the Building

There is a mental satisfaction derived from specifying BERLOY Lockers — YOU KNOW THAT LOCKER EXPENSE IS OVER! They are rugged. They are quiet. You know they will ALWAYS LOCK! The constructional advantages illustrated above explain their nation-wide acceptance. Yet there is no price penalty in BERLOY Lockers. Volume and efficiency in production bring these super-built units to the market at prices that are very much "in line." Protect your community and the school board's pocketbook by specifying BERLOY. There are six types from which to choose.

THE BERGER MANUFACTURING CO.

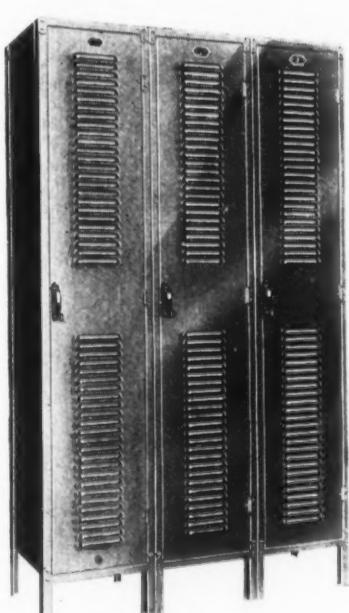
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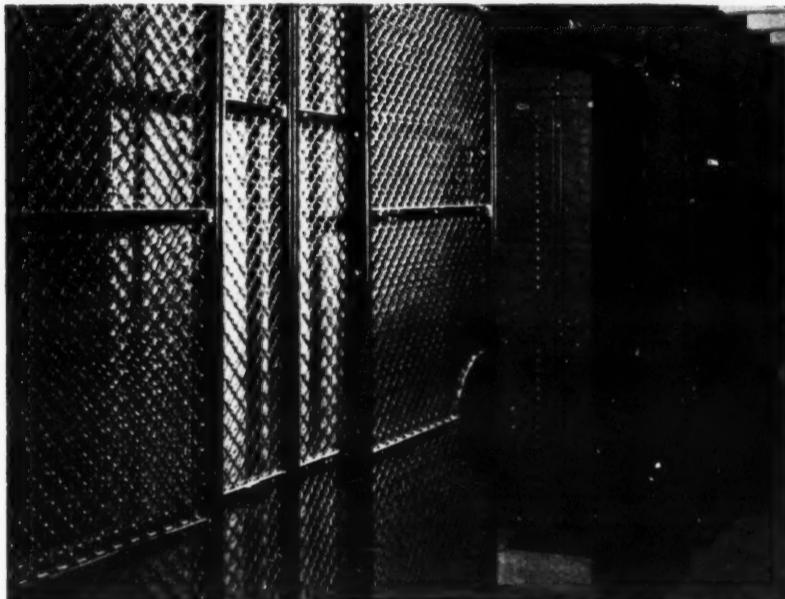
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Clean, Cool, Safe *Locker Rooms*



Cyclone Sectional Partitions Installed in Locker Rooms of New Trier High School, Kenilworth, Illinois.

—with Cyclone Sectional Partitions

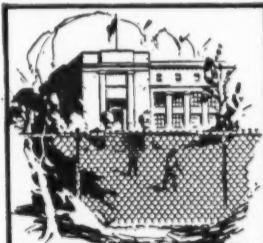


All chain link fence is not Cyclone. This name plate identifies the genuine Cyclone Fence.

Protect lockers this modern way. Cyclone Sectional Partitions meet every need. Quickly installed at moderate cost. All sections standard size and punched alike for bolts — easily interchangeable. Swinging or sliding gates equipped with tamper-proof latches. Painted black. We also make woven wire window guards and chain link tennis court backstops. Cyclone Fence is the standard playground protection used by leading schools everywhere. Chain Link or Wrought Iron. Erected by our own trained men. We take complete responsibility for finished installation.

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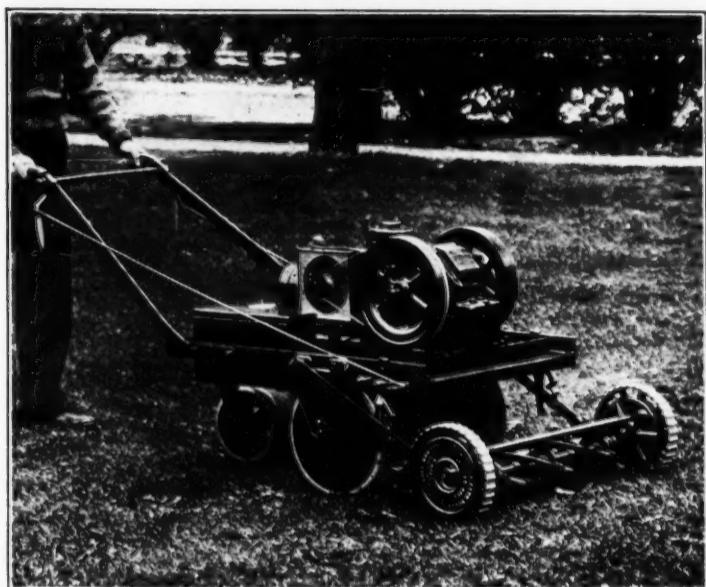
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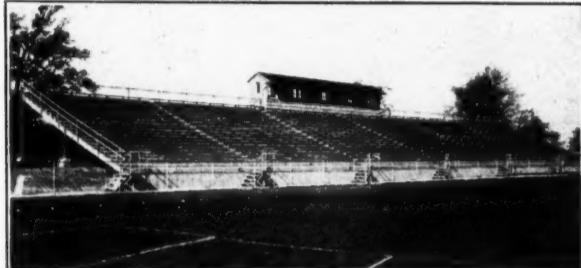
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NEW RULES & REGULATIONS

SACRAMENTO RULES GOVERNING ADMINISTRATION OF SCHOOLS

An Outline of a General Plan of Organization for the Sacramento School Department

The school board of Sacramento, Calif., has adopted a set of rules for the administration of the city schools. An important part of these rules is that relating to the general plan of organization and the assignment of duties to the various heads of departments. Under the rules the following duties are provided:

Superintendent of Schools—The superintendent shall develop the general theory and plan of education for the city. He shall recommend the selection and control the assignments to the teaching and supervisory staffs.

He shall recommend the duties and direct the immediate subordinates in the formulation and execution of internal policies in the schools.

He shall develop a building program. He shall prepare and present matters for legislative action of the board.

He shall direct the preparation of a budget and the execution of the same.

He shall represent the school system before the public. He shall act as general inspector, coordinator, and executive of the school system.

He shall act as secretary to the board by charter provision, and shall maintain regular office hours. He shall publish an annual report on the condition of the school system.

Deputy Superintendent—The deputy superintendent shall control the development and execution of policies in all the schools.

He shall direct the development and the revision of the curricula.

He shall build up and direct the use of a professional library. He shall direct the supervision of instruction, and the program of teacher training in service.

He shall direct the research department in its work, direct the selection of text and supplementary books, and shall assist the superintendent as directed.

Assistant Superintendents—The assistant superintendent in the secondary school shall have advisory charge of the junior high schools, the senior high schools, the junior college, the part-time high school, the evening-high school, and adult education of all kinds.

He shall direct the principals of the various schools and shall be responsible for the supervision of instruction and the improvement of teaching. He shall present reports to the superintendent with recommendations as to the desirability of continuing teachers in the schools and the termination of the probationary period.

He shall supervise and direct all experimental and tryout work for the experimental schools, and shall supervise the testing programs conducted with a view of testing educational results and improving the instruction.

He shall have charge of the organization and administration of the schools, particularly the general care, upkeep, and condition of the physical plant.

He shall have charge of the studies regarding school growth, school costs and the elimination of waste, promotions, failures, and marking systems, and of other vital school problems.

He shall assist in the selection of textbooks, except in the junior college, where the president is responsible for the policy regarding the selection of books.

He shall present reports to the superintendent indicating whether or not the principals are carrying out the programs for which they are responsible. He shall be responsible for the development of the program of cooperative part-time education for the city.

He shall assist the deputy superintendent with the curriculum revision and development, and shall assume such other duties as may be assigned to him by the superintendent or deputy superintendent. He shall prepare all official reports and shall assist the superintendent as directed.

The *Business Manager*—The duties of the business manager are to direct the purchasing and storing of materials and supplies authorized for purchase by the supplies committee, and to distribute the supplies according to the needs of the school department, on requisition of those responsible for the department.

schools shall have advisory charge of the elementary and special schools.

He shall have charge of the health and development in all the schools.

He shall hold the principals of the several schools responsible for the supervision of instruction and the improvement of teaching. He shall make reports to the superintendent with recommendations for continuing teachers in the schools, and for the termination of the probationary period.

He shall have charge of the supervision and shall direct all experimental and tryout work in the experimental schools. He shall have charge of the testing programs conducted in the schools with a view of testing educational results and improving instruction. He shall have charge of the organization and administration of the schools.

He shall prepare reports on the alteration, repair, or enlargement of buildings.

He shall direct the setting up of special studies governing school growth, school costs and elimination of waste, promotions, failures, and marking systems. He shall assist in the selection of textbooks.

He shall assist the deputy superintendent with or not the principals are carrying out the programs for which they are responsible.

He shall assist the deputy superintendent with the curriculum revision and development, and shall assume such other duties as may be assigned to him by the superintendent or deputy superintendent. He shall prepare all official reports and shall assist the superintendent as directed.

The *Business Manager*—The duties of the business manager are to direct the purchasing and storing of materials and supplies authorized for purchase by the supplies committee, and to distribute the supplies according to the needs of the school department, on requisition of those responsible for the department.

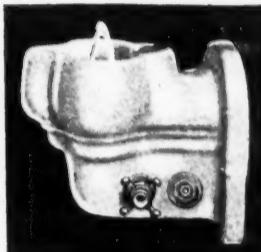
He shall be responsible for the preparation and care of all business documents, accounts, records, and archives. He shall be responsible for the execution of all business contracts and shall direct the work of manufacturing, repairs, and alterations.



THE architects (Warren S. Holmes Co.) selected for this building at Lansing, Michigan, Halsey Taylor Drinking Fountains.

For school use especially, these modern drinking devices eliminate the dangers of contamination since no lips need ever touch the distinctive two-stream Halsey Taylor projector. Other patented features not only guarantee protection but a welcome freedom from servicing . . . The Halsey W. Taylor Co., Warren, Ohio.

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Automatic Steam Control

No lips need touch two-stream projector, which gives ideal hygienic and practical drinking mound with automatic stream control to guarantee uniform height of drinking stream regardless of pressure variation.

HALSEY TAYLOR Drinking Fountains

He shall be responsible for the general supervision of new construction.

He shall cooperate with the research department in the development of a cost-accounting service and standardizing of maintenance and instructional supplies.

He shall assist the superintendent with budget preparation and otherwise as directed. He shall set up an adequate plan among the schools and school auditors, to enable him to receive and to be responsible for all moneys received from the various schools. The auditor shall be responsible for all money to the extent of the amounts received from the principals of the different school units, which is collected and derived from student-body activities, cooperative store, cafeteria, or other major activity, also money derived from miscellaneous sources such as locker-key deposits, laboratory fees, refund of teachers' salaries, etc., which come within the jurisdiction of the board of education, for expenditure or disbursement or for deposit in the general county-school fund.

He shall direct the head custodian, whose duties are the cleaning and care of school buildings, through an organized standardization of methods of what constitutes proper building care. Such a plan would include such major items as treatment of floors and blackboards, proper heating and ventilation, and provisions for regular training classes for all custodians.

Supervisors—The supervisor shall make a continuous and direct study of instruction coming under his particular department. He shall assist the deputy superintendent with teacher-training programs, and with curriculum revision and expansion.

He shall aid the deputy superintendent in library service, shall work under the direction of the principal of the school, and shall be directly responsible to the assistant superintendent.

Principals—The principal is directly responsible to a designated assistant superintendent. His duties are to advise with the deputy superintendent concerning the transfer, promotion, or dismissal of teachers. He shall carry out the educational program of the superintendent.

He shall visit classrooms and supervise instruction, and shall make suggestions to the teachers

for their improvement. He shall assist the teachers in defining their aims and objectives, and shall assist them in planning their work. He shall conduct teachers' meetings for professional improvement, and shall assist teachers in professional advancement through directed reading.

He shall cooperate with the assistant superintendent in the development of the curriculum, and shall cooperate with the research director and student personnel in differentiating pupils into groups of approximately equal ability.

He shall see that the rules and regulations of the board and the superintendent are carried out in his building, and shall set up and enforce rules for the control of children in his building. He shall coordinate the work of the entire building into a unified program.

He shall make reports to the superintendent as directed, and shall maintain office hours satisfactory to the superintendent.

Director of Research and Student Personnel—The director of research shall, through his department, serve the entire school system, and his department should constitute a real service department. The director shall be responsible to the superintendent through whom all policies are established for the department.

He shall provide research of staff service for all parts of the school system. He shall provide general supervision for all guidance service in the schools.

He shall coordinate and direct the work of student placement and shall build up records for follow-up work of all students placed in positions. He shall have general charge of attendance and welfare service.

Director of Health and Development—The director of this department shall have charge of health and physical education of the entire system. His chief functions shall be to unify and coordinate physical-education practices for different ages and sexes, and to organize an intramural sports program for the entire city, taking into account the necessity for such a program after school hours and on Saturdays.

The school physician shall be responsible to the director of health and shall have charge of continuous and casual inspections of pupils by nurses. He shall conduct physical examinations of entering

first-grade children, and shall give special attention to those participating in vigorous physical contests.

He shall make special inspections with laboratory tests for specific cases by nurses, doctors, and dentists.

He shall have supervision of a regular program of height and weight measurement of children, and shall direct school principals in nutrition, diet, and health problems. He shall keep a complete system of records of cases.

NEW SICK-LEAVE RULE FOR MALDEN TEACHERS

The school board of Malden, Mass., has adopted a new rule governing sick leaves for teachers and pay during such absence. The rule reads as follows:

"Any teacher who may hereafter suffer an enforced absence from school because of personal illness, for a period of time greater than the ten days allowed, during any school year, may receive the benefits of cumulative sick leave. Cumulative sick leave is the sum of all unused portions of a teacher's annual allowance for sick leave, computed from September 1, 1929, but not to exceed a period of five years, and not to exceed a maximum of thirty days. The beneficiary is entitled to a leave of absence with pay, for such unused portions of the annual sick-leave allowance, but not to exceed a maximum of thirty days during the consecutive and uninterrupted years of service which the teacher has rendered, not exceeding five years prior to the school year in which the teacher's application for the benefit is made."

"A written notice of application for benefit under the cumulative sick-leave rule, accompanied by a statement of the beneficiary's physician, must be presented to the superintendent of schools within ten days after the commencement of the disability. Thereafter, at the end of each two weeks, the beneficiary shall file with the superintendent of schools an absentee's certificate of disability signed by his or her physician."

The school board reserves the right to require the certificate of the city physician, in addition to the above certificate. Failure to comply with the regulations governing the cumulative sick-leave plan suffices to deprive the applicant of participation therein.

(Concluded on Page 140)



The pupil might better be upside down —so far as the temperature found in some school rooms is concerned

YET this temperature condition actually exists in the average poorly ventilated school room. Hot heads are not conducive to clear thinking—neither are cold feet. In classrooms with ordinary ventilation, the temperature at the floor line is often 10 degrees colder than that at the breathing line. Under such conditions if the head is reasonably cool, as it should be, the feet are "frozen." Don't forget that when a child's feet are wet from rain or snow, the evaporation of moisture draws heat from both the shoes and the feet, thus exaggerating the effect of the cold temperature. These conditions together with stagnant air are prolific causes of colds.

Under such differences of head and floor temperature and bad ventilation, a pupil cannot concentrate much better than if he were turned upside down. His marks suffer and so does his health.

Ideal conditions are not difficult to secure. A uniform temperature is obtained by the proper use of the PEERVENT Unit Ventilation System which reduces this temperature difference to only 2 degrees. This system discharges into the classroom the correct amount of fresh air, warmed to the proper temperature, at a velocity sufficient for complete diffusion, and vents the vitiated air through properly designed and properly located openings. The temperature of the entering fresh air may be controlled by a thermostat.

When PEERVENT Units are used, unoccupied cold rooms may be heated quickly by opening the recirculating damper. This automatically closes the fresh air inlet.

PEERVENT Units make each room independent of the others and only the rooms in use need be ventilated. PEERVENT Units are absolutely silent in operation—there is no vibration. For better ventilation, investigate the new improved PEERVENT Unit, as developed by the "PIONEERS IN UNIT VENTILATION."



PEERLESS UNIT VENTILATION CO., Inc.
BRIDGEPORT, CONNECTICUT
Pioneers in Unit Ventilation

Resident Engineers in Principal Cities from Coast to Coast



Above we show one of the welding operations in the manufacture of WEISTEEL partitions

• • • *they can never
be loosened!*

Pent-up, exuberant, youthful playfulness exploding itself at recess, noon hour or after school, in toilets and dressing rooms creates no damage hazard for WEISTEEL Compartments.

Steel sheets with posts and panels securely anchored together in what is really a single piece--this is WEISTEEL construction.

Top and bottom V-rails actually formed of the panel sheet, and the panels themselves drawn into the posts and locked with welded lugs and by welding at top and bottom make WEISTEEL partitions solid units that never can be loosened.

WEISTEEL construction throughout means maximum service all down the years . . . may we send you all the details, without obligation? HENRY WEIS MFG. CO., INC., Elkhart, Indiana.

WEISTEEL

TOILET---DRESSING ROOM COMPARTMENTS

(Concluded from Page 138)

NEW SCHOOL-BUS RULES

The new rules relating to school-bus services have been announced by John L. Clifton, state school director of Ohio, as follows:

The driver cannot legally draw pay until he has secured a driver's certificate from the county board of education and a chauffeur's license from the commissioner of motor vehicles.

These licenses may be revoked by either the board of education or the state on proof of improper conduct or neglect of duty.

The driver shall bring his vehicle to a complete stop before crossing any railroad line or electric line.

Vehicles shall not travel more than 25 miles an hour when pupils are in them.

Two of the older pupils riding in school conveyances shall be designated as flagmen to run ahead after the bus has stopped at a railroad crossing to signal the driver when it is safe to cross.

Each school bus shall be equipped with a light to warn other drivers that he is about to stop or to turn.

The driver shall be under the direct supervision of the local superintendent in concurrence with board of education.

No substitute driver can be used until approved by the board of education as a whole.

Each school bus shall be equipped with two mirrors, one in front to afford the driver a view of traffic in the rear and another to the left front of the driver and outside the bus.

Each school bus shall be equipped with a fire extinguisher approved by the board of education and within easy reach of the driver.

Gasoline tanks must not be refueled while pupils are in the bus. The number of pupils transported shall be limited to the comfortable seating capacity of the bus.

The motor shall be stopped, the gears shifted to low, the brakes set, and an older boy detailed to watch the bus when the driver leaves the bus with children in it.

RULES AND REGULATIONS

—The board of education of Medford, Mass., has adopted a rule against collections by pupils in the schools. Complaints have come to the board that moneys by children have been raised for the purchase of school apparatus.

—The board of education of Worcester, Mass., has ordered the business manager to secure copyrights on the new course of study in geography issued by the board and all future studies and publications of the school department.

—Membership campaigns and canvassing of any kind are to be barred at meetings of the supervisors and teachers held in the public-school buildings of New York City. Supt. William J. O'Shea has warned supervisors not to permit persons to address them either during, before, or after the conference for the purpose of selling books or other merchandise or of soliciting the assembled teachers to join any organization unless permission

PUBLIC-SCHOOL RESEARCH BUREAU

The function of a public-school research bureau is primarily to collect and organize whatever data may be necessary or available for the intelligent solution of the problems of the school system. Just as in industry, it is the business of the research department to make careful and accurate analyses of the facts, in order that the executive staff may plan more wisely for the success of the institution. Its task is to furnish the information on the basis of which administrative policies and teaching practices may be evaluated, their strength or weakness discovered, and measures for their improvement found. Whatever else it may be, the research bureau is primarily a fact-finding, fact-digesting institution. Its job is to determine the merits of our educational practices, not upon the basis of opinion, but upon the basis of objective evidence insofar as that evidence is to be had.—W. W. Theisen, Assistant Superintendent of Schools, Milwaukee, Wis.

to do so has been granted by the superintendent of schools. The superintendent ruled that conferences of teachers should be devoted solely to questions of school organization and administration. The principals also were requested to prevent any attempt at canvassing at meetings of parents' associations in school buildings.

—The Minneapolis board of education some time ago enacted a rule to the effect that teachers in the employ of that city must be legal residents of the same. The rule, however, has never been enforced. A local newspaper says: "Minneapolis teachers presumably are engaged on their qualifications as teachers, and their place of residence is not logically a factor among such qualifications, any more than the kind of shoes they wear or the kind of food they eat."

—The Detroit board of education has under consideration a rule, which provides that all employees of the school system of that city must be residents of Detroit and American citizens. Investigation showed 29 teachers who had only first papers for citizenship. In the noneducational work there are 73 without first papers, 144 have first papers, and 47 are in doubt.

—A health rule announced in the annual report of the Rockland, Mass., schools provides that pupils who have been absent from school on account of contagious disease must secure a permit from a school physician before reentering. In cases of doubt, or in cases where there exists a suspicion of contagion, the parents should advise, and the teachers should require, that the pupils consult the school nurse, who may refer the case to a school physician for further examination.

—Cincinnati, Ohio. The parent-teacher associations and the mothers' clubs of the city schools, under the direction of the board of health, are completing plans for the annual round-up of children who will enter school for the first time next September. The plan of organization and the suggestions as to procedure are being arranged by the federation of mothers' clubs, in co-operation with the city health commissioner.



Blow, wind, Pour, rain!

— windows are closed, but the classroom air is clean and pure!

WHATEVER the weather outside . . . it's always fair weather inside, where Sturtevant Unit Heater-Ventilators are installed! Classrooms have an even, temperate climate all their own.

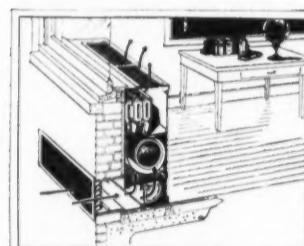
Windows are shut tight against wind and rain, yet plenty of air comes in. Sturtevant Unit Heater-Ventilators draw in outdoor air...filter it...temper it...then waft it quietly into the room. There's not a sign of draft, yet the air keeps circulating . . . keeps pure and invigorating. Control is either automatic or manual, as preferred.

See how other schools . . . old and new . . . have solved the dangerous "cold draft" problem and have secured highly effective, uniform heating and ventilation through the use of Sturtevant Unit Heater-Ventilators. Many installations are shown in our Catalog 361. School officials, architects and engineers are invited to write for this book.

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Sturtevant *the silent* Unit Heater-Ventilator

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SUPPLIES OUTDOOR AIR ~ FILTERED CLEAN ~ AND TEMPERED

Price of School Bonds Continues High

Index of School-Bond Prices¹

Harold F. Clark, Ph. D., New York

The school-bond interest rates are much lower than they have been in recent months. During the month of March, interest rates fell .23 of 1 per cent. This decrease in interest rate means a large saving to school boards issuing bonds. On the bonds issued during the month of March alone, the saving during the life of the bonds will amount to almost \$2,000,000.

Bulletin says that bonds have reached the highest point since 1925, this applies not only to old issues, but to new issues being brought out. If this is true, schoolmen have certainly not received the full advantage of the better bond market. Less than two years ago school bonds were selling for almost .4 of 1 per cent less interest rate than at present.

There is only one cloud upon the horizon as far

of 3.72 per cent last August. After a drop to November and a slight rise in January, the bonds have reached a new low level of interest. There is every reason to believe that the movement has not ended. The rate at present is almost exactly the average rate for the year 1928. Sooner or later

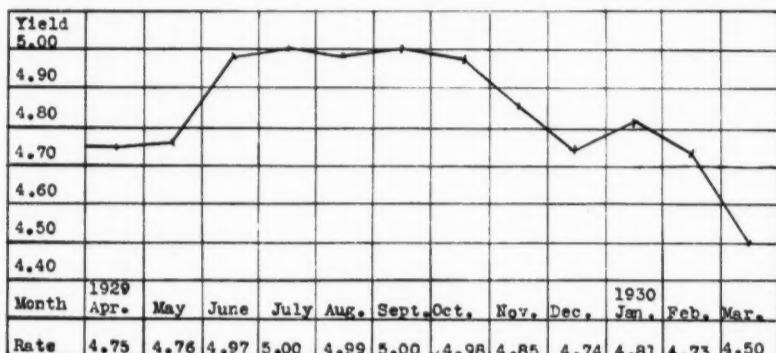


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

With interest rates $\frac{1}{2}$ of 1 per cent lower than last September, what of the future? Will the decline continue? Time and again during the past month the financial papers have carried the comment, bonds have reached a new high level today. High prices, of course, mean low net interest rates. When bond prices are going up the schoolman who has bonds to sell should be happy. If he is selling 4-per-cent bonds he will get a good price for them. Any superintendent selling 4½-per-cent bonds today should obtain a premium, if the bonds are properly sold.

The following statement of The National City Bank indicates the change that has occurred in credit conditions: "Nevertheless the outstanding fact is that fundamental credit conditions have undergone a marked change for ease not only in this country, but all over the world. The collapse of the world-wide speculation in Wall Street, the depressed state of business in this country and abroad, the fall of commodity prices and shrinkage in international trade, representing the aftermath of last year's overproduction and overexpansion, have reversed the equation of the supply of and demand for credit, and resulted in an accumulation of short-time funds which is pressing on the money markets of the world."

TABLE II

Amounts and Yields of Bond Issues²

1. School bonds sold during the month of March	\$ 25,520,000
2. All municipal securities sold during year (to date).....	296,470,000
3. All school bonds outstanding (estimated)	3,269,000,000
4. Average yield of all school bonds outstanding (estimated)	4.65%
5. Yield of school bonds of ten large cities	4.39%
6. Yield of United States long-term bonds (quotation the middle of April).....	3.35%

²The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

The profound effect of these changes upon the interest rates of school bonds is probably not realized by most schoolmen. During March the Federal Reserve Bank of New York reduced its discount rate from 4 to 3½ per cent. Bankers' acceptance rates were cut several times during the month and the rate finally reached 2½ per cent. Call money reached a low point of 2 per cent during the month. This is the lowest rate in recent years. It is quite true there has been some hardening of interest rates in April. However, there is every reason to expect a continuation of low interest rates for some time. With money available at the low rates quoted above, there is no reason why the schoolman should not get better prices for his bonds than he is getting at the present time. The Federal Reserve Bank of New York in its April

Year	Bond Sales			Year	Average Rates	
	Schools	Municipal	All Public and Private		1929	1928
1929.....	\$230,000,000 ⁴	\$1,432,000,000 ⁴	\$10,194,000,000 ⁴	1929.....	4.67 ⁴	
1928.....	218,000,000	1,414,000,000	8,050,000,000	1928.....	4.45	
1927.....	266,000,000	1,509,000,000	7,776,000,000	1927.....	4.49	
1926.....	260,000,000	1,365,000,000	6,344,000,000	1926.....	4.61	
1925.....	323,000,000	1,399,000,000	6,223,000,000	1925.....	4.58	
1924.....	288,000,000	1,398,000,000	5,593,000,000	1924.....	4.26	
1923.....	206,000,000	1,063,000,000	4,303,000,000	1923.....	4.76	
1922.....	237,000,000	1,101,000,000	4,313,000,000	1922.....	4.81	
1921.....	215,000,000	1,208,000,000	3,576,000,000	1921.....	5.18	
1920.....	130,000,000	683,000,000	3,634,000,000	1920.....	5.12	
1919.....	103,000,000	691,000,000	3,588,000,000	1919.....	5.04	
1918.....	41,000,000	296,000,000	14,368,000,000	1918.....	4.90	
1917.....	60,000,000	451,000,000	9,984,000,000	1917.....	4.58	
1916.....	70,000,000	457,000,000	5,032,000,000	1916.....	4.18	
1915.....	81,000,000	498,000,000	5,275,000,000	1915.....	4.58	
1914.....	42,000,000	320,000,000	2,400,000,000	1914.....	4.38	

³By special permission, based upon sales reported by the Commercial and Financial Chronicle.

⁴Not final.

as credit conditions are concerned. The loans to brokers have increased almost \$500,000,000 in the past two months. It was this constant increase of brokers' loans that led to the abnormally high interest rates of last summer. If this condition is starting again, interest rates will not remain low for long. If these loans do not expand, there is no reason why school bonds should not sell substantially lower during the next sixty days. The long-term outlook is even more hopeful. Unless there is some artificial strain upon credit, there is no reason why the average school district should not look forward to selling 4-per-cent bonds at par and the exceptional district to selling 3.50- or 3.75-per-cent bonds at par.

Total bond sales during the month of March were the largest for some time, being about \$25,000,000. This compares with a total of approximately \$19,000,000 for February.

Table IV shows that the average yield of long-term government bonds is definitely down. The average yield on these bonds reached a high point

Past Twelve Months	Average Yield of Long-Term Federal Government Bonds ⁵		
	Rate %	Year	Rate %
1930.....	3.44 ⁶	1928.....	3.437
April.....	3.45 ⁶	1927.....	3.464
March.....	3.50	1926.....	3.544
Feb.	3.51	1925.....	3.797
Jan.		1924.....	4.010
1929.....		1923.....	4.298
Dec.	3.46	1922.....	4.301
Nov.	3.45		
Oct.	3.67		
Sept.	3.70		
Aug.	3.72		
July	3.67		
June	3.71		
May	3.67		

⁵Taken from Federal Reserve Bulletin.
⁶Not final.

we may expect government bonds to drop to lower interest levels than in 1928.

Table V shows that stocks have definitely started a rapid advance. According to our figures, stocks have regained about 40 per cent of the amount lost in October and November. Some of the very recent increase has been brought about by borrowed money. If this increase continues and the increase in brokers' loans also continues, we may expect a definite slowing up in the improvement of bond prices. The two figures should be watched closely by anyone interested in selling bonds this summer. The price of the bonds continues upward and consequently their yields continue downward.

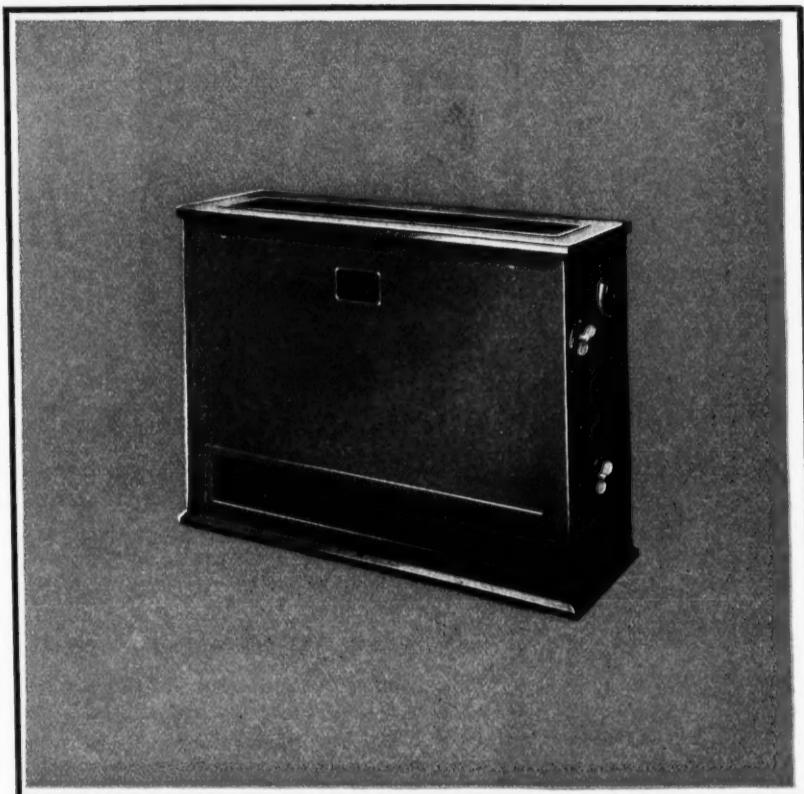
TABLE VI

Revised Index Numbers of Wholesale Prices⁷

All Com- modities	Past Twelve Months		Past Six Years	
	Building Materials	Building Materials	Month	modities Materials
April	91.9 ¹⁰	95.7 ¹⁰	1928	97.7
Mar.	91.8 ¹⁰	95.6 ¹⁰	1927	95.4
Feb.	92.1	95.7	1926	100.0
Jan.	93.4	96.2	1925	103.5
1929			1924	98.1
Dec.	94.2	96.2	1923	102.3
Nov.	94.4	96.0		
Oct.	96.3	97.8		
Sept.	97.5	97.5		
Aug.	97.7	96.7		
July	98.0	96.7		
June	96.4	96.4		
May	95.8	96.8		

⁷United States Bureau of Labor Statistics, 1926=100.

The decline in commodity prices has become a disturbing element in the business situation. The price of all commodities continues on its downward trend. Building materials usually show a decided upward trend at this time of year. At the present time it at least seems as though prices have been stabilized temporarily. This relative cheapness of material means a desirable time to build.



*Universal Heating and
Ventilating Units ARE
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Dependable . . . Reliable
. . . Pleasing in Appearance*

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That's why Universal Units are so popular . . . why many of the nation's leading schools are equipped with them.

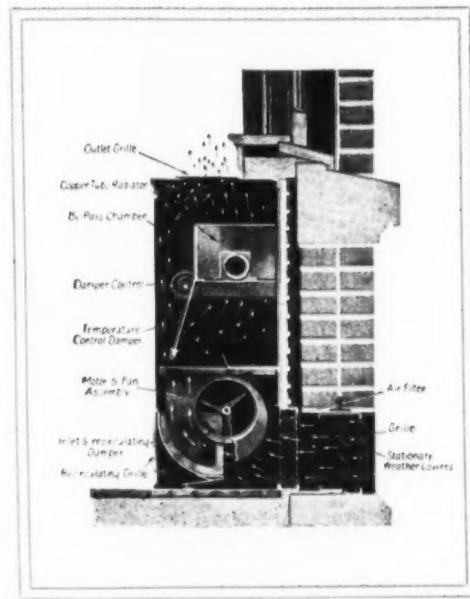
Universal Units not only meet your heating, but also your ventilating requirements. They deliver a vertical discharge of air—air that is forced up into the room at a high velocity—air that is clean, wholesome, healthful—that is just the temperature you want it—air that is provided quietly and without drafts.

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A phone call or letter to any American Blower Branch Office, one of which is located in every principal city, will bring you complete data without the slightest obligation.

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Branches in Principal Cities

county, Md., has been appointed to succeed Mr. John O. Thayer as a member of the county board of education.

—MR. B. B. HORRIGAN has been reelected as a member of the school board of Pasco, Wash., for a three-year term.

—MR. J. D. WALLACE, of Butte, Mont., has been elected president of the Montana Education Association for the year 1930-31. Mr. Wallace is prominently identified with the board of education in Butte.

—MR. J. H. SECREST has been reelected as president of the school board at Longview, Wash. Mr. J. M. RAGLAND was reelected as clerk of the board.

—SUPT. E. M. BALSBAUGH, of Lansford, Pa., has been reelected for another four-year term, beginning with July, 1930.

—MR. SAMUEL ENGLE BURR, director of research for the public schools of Lynn, Mass., has resigned to accept an appointment as superintendent of schools at Glendale, Ohio, on September 1. Mr. Burr will act as an instructor in the summer session of St. Lawrence University, Canton, N. Y.

—SUPT. M. G. CLARK, of Sioux City, Iowa, has been reelected for a new three-year term, beginning with July 1. Mr. Clark went to Sioux City in 1911, from Streator, Ill., and has completed twenty years of continuous service.

—New York, N. Y. Augustus Roberts and James E. Meek have been appointed deputy superintendents of school buildings by the board of education. Mr. Roberts will be in charge of Manhattan schools, and Mr. Meek in charge of Richmond schools.

—Tupper Lake, N. Y. The Central School District was recently changed from a union free school district by a majority vote of the people and is operating successfully. The newly appointed board for the Central District consists of Mr. C. S. Potvin, president; Mr. John Twohey, clerk; Mr. Henry Fitzsimonds; Mr. J. W. Starks; Mr. Roy Lavoy; and Mr. J. Howard Brown, treasurer of the district.

Personal News of School Officials

DEATH OF JAMES B. JACKSON

MR. JAMES B. JACKSON, who died at his home in Kansas City, Mo., on March 22, was an employee of the board of education for forty years and was for the last 21 years secretary of the board. Mr. Jackson was 58 years old.

Mr. Jackson, who was born in East Saginaw, Mich., moved to Kansas City with his parents in June, 1880. He was educated in the elementary schools of Kansas City and for a time attended the Central High School, leaving in 1887 to accept a position in the public library.

Mr. Jackson is survived by his widow, Mrs. Minnie E. Jackson.

NEWS OF OFFICIALS

—MR. GROVER WELLS has been appointed a member of the board of education of Ardmore, Okla., to succeed Mr. A. J. Jones.

—MR. E. B. GRAY has been elected president of the board of education at Barnsdall, Okla.

—MR. R. F. FRANTZ, president of the school board of LaHabra, Calif., has resigned, after completing a service of seven years on the board.

—MR. JIM COOK has been elected a member of the school board at Three Sands, Okla.

—MR. FRED CHARLES, formerly director of publications for the school board of Cleveland, Ohio, has resigned and accepted a position as chief editorial writer for the *Buffalo Times*. Mr. Charles had been associated with the school board since 1928.

—MR. THOMAS E. JOHNSON, formerly state superintendent of schools of Michigan, has declared

that he will appeal to the supreme court, a decision of the Ingham circuit court, ordering him to pay to the state more than \$12,000 received while in office. Mr. Johnson contended that the decision ordered him to reimburse the state only to the amount of the salary drawn from a federal fund, plus the accrued interest.

—MR. CHARLES H. MORSE, vice-president of the board of education of Pasadena, Calif., died at his home on March 6, after a long illness. Mr. Morse, who was an educator and an engineer, was graduated from the Massachusetts Normal School and the Massachusetts Institute of Technology. For eleven years he was principal of the Rindge Technical High School, Cambridge, Mass., resigning in 1907 to become secretary of the state commission on industrial education, a position he held until 1909.

Mr. Morse was elected to the Pasadena board in June, 1927, and during the three years of his service, he won the respect of his coworkers. Last year he was elected vice-president and was re-appointed as chairman of the supplies committee.

—MR. R. H. FONVILLE, for ten years a member of the school board of Houston, Tex., has resigned. MR. J. J. CARROLL has been elected as a new member of the board to fill the vacancy. JUDGE K. C. BARKLEY was elected as president, to succeed Mr. Fonville.

—MR. R. M. THOMSON, for many years a member of the school board, and a former superintendent of schools at Ravenna, Nebr., has resigned after nearly 30 years of service.

—OSCAR S. WOOD, formerly professor of educational administration at the University of Denver, will become director of that institution's city college on September 1. Professor Wood succeeds Dr. D. E. Phillips, who is on a leave of absence.

—MR. JOHN D. CLARK, formerly with the Standard Oil Company of Indiana, has joined the University of Denver as professor of economics. Mr. Clark is now pursuing a course at Johns Hopkins University in preparation for the Ph.D. degree.

—MR. STUART F. HAMILL, of Oakland, Garrett

WHERE the dependable functioning of the heating plant becomes a factor in safeguarding the health of children, it is the soundest of good judgment to choose



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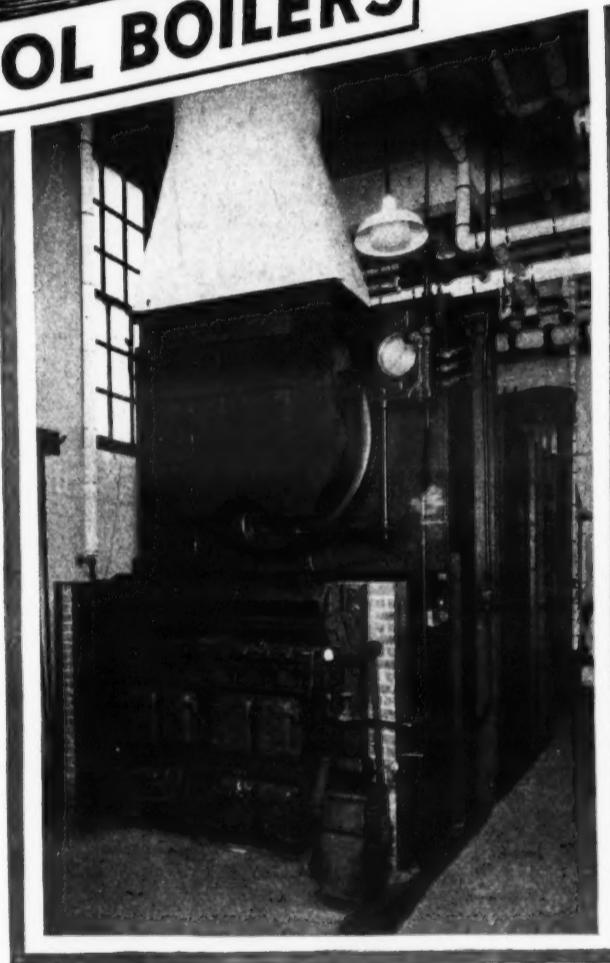
School architects, heating contractors and school building committees of experience join in recommending "Titusville" as a first-line choice for school heating. Such a boiler room installation as pictured here is as much of a "show" place as are the classrooms and assembly hall. Make it so in your new schools.

*We'll gladly send you a set
of descriptive bulletins.*

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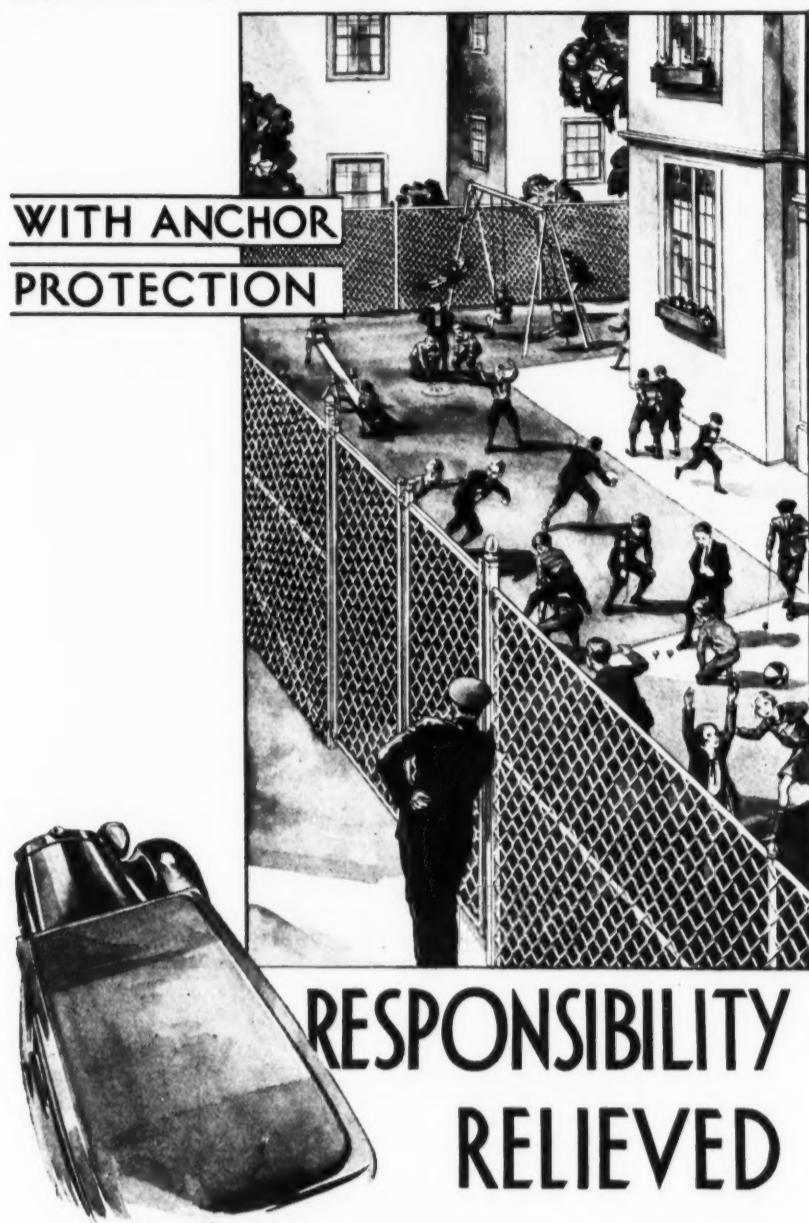
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in the boiler room of the John Scullin School, St. Louis, Mo.



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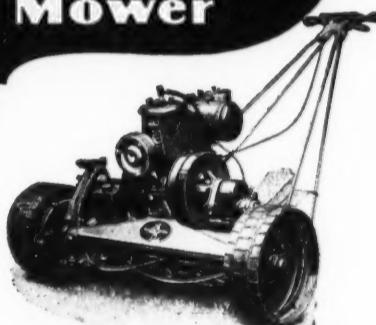


Beautiful School Lawns at Lower Cost

WELL kept school lawns, buildings and equipment are important in moulding the ideals and habits of the student. Lawns of one-quarter of an acre or more can be cut more economically and better with a Jacobsen Power Mower.

The Jacobsen 4-Acre Mower is the best-known power mower made. It does the work of four or five men with push-type mowers, and with a lower upkeep cost than any other walking-type power mower. It has a 24-inch reel, an enclosed gear drive, auto-

Jacobsen 4-Acre Power Lawn Mower



type differential, separate clutch control of traction and cutting unit, self-sharpening reel and other outstanding refinements.

The "Junior" Power Mower is a quality Jacobsen Product with a 19-inch cutting reel. Suitable for moderately large lawns — particularly efficient on terraces.

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This Self-Moistening SPEED-SWEEP Brush eliminates sweeping compound. The brush moistens the dust as you sweep, thus converting the dust itself into a sweeping compound far more effective than any commercial compound you can buy.



Note the patented construction. SPEED-SWEEP is built with precision to stand long wear!

Save On Your Cleaning Bill

Stop throwing sweeping compound on your school floors before brushing. It is EXPENSIVE and only ADDS DIRT TO THAT ALREADY ON THE FLOOR—making cleaning just twice as hard!

Fill the coupon for complete information on our 30 day trial.

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Send me details of your FREE 30 DAY TRIAL of a SPEED-SWEEP Brush.

School.....

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Superintendent.....



A NEW PLAN FOR ASSEMBLY PROGRAMS

The school system of West Salem, Ohio, at the suggestion of Supt. W. L. Davis, has adopted a new form of assembly program which is suitable for a small school system. Formerly, the schools maintained an assembly program of twenty minutes each morning, which entailed too much work for the teachers and pupils.

Under the new arrangement, the program is arranged by special groups, comprising senior- and junior-high-school students, sophomores and freshmen, seventh- and eighth-grade students, fifth- and sixth-grade students, third- and fourth-grade students, and first- and second-grade students. Each of these groups takes over the program in turn on Monday morning. The program, which covers 45 minutes, is interspersed with selections by the school orchestra. The arrangement provides for competition among the groups, since each group endeavors to put on the best possible program. The school programs have a special attraction for the school patrons who come to the school from time to time, without any special invitation.

SAFETY IN THE SIOUX CITY SCHOOLS

Upon the request of Supt M. G. Clark, the principals and teachers in the Sioux City, Iowa, schools have been required to make a study of safety in their respective buildings and classes.

The following points were checked concerning the studies of safety in the buildings proper:

The Status of Safety in School

1. Building Conditions
 - a) Doors, hallways, stairways.
 - b) Janitors' closets, teachers' closets, and other storage space.
 - c) Fire apparatus.

- d) Type of building — fireproof, semifireproof, nonfireproof.
- e) Other conditions

2. Fire Drills

- a) Thoroughly organized with more than one method of egress, if the fire should block certain portions of the building.
- b) Time required under each condition to evacuate the building.
- c) When drill is given, does everyone leave — teachers, janitors, and all?
- d) What arrangement is made for checking the complete evacuation of the building?
- e) What arrangements are made for opening the doors immediately upon sound of the gong?
- f) What part does each teacher take in the fire drill?
- g) Do children move so far away from the building that they would not interfere with the fire trucks and other fire hazards?
- h) Are fire-signal gongs in good working condition?
- i) Other conditions.

ADMINISTRATION NOTES

—Hamtramck, Mich. The school safety department has presented a report on safety work during the first three months of 1930. The report shows that, during the first 25 days of March, there was a total of 52 accidents, of which 17 were injuries. Of the 17 injured, only 6 were children of school age, which has led the school authorities to believe that the school children have practiced safety measures to a greater extent than adults. During this time there was no fatality.

A tabulation of the injury accidents shows that there was a total of 66 people injured. Of this number, 37 were adults and 29 were children. Leaving out the injuries to children which happen while engaged in play, it is noted that the adult outnumbers the injury to child at least four to one. This fact shows that the school children are heeding the safety rules when not influenced by the interest of play.

The central office has prepared a spot map which shows clearly the danger points of the city's traffic. An interesting fact brought out by this shows that not a single injury accident has occurred in the immediate vicinity of any of the

schools. This points directly to the effectiveness of the safety patrols and the traffic police, who so carefully guard the children as they pass to and from school. The spot map is placed in the exhibit case of the junior high school each month. At least one spot map is kept up-to-date in each school, where it may be observed by all of the pupils. It makes it possible for the children to know by observation the danger streets and crossings as they exist in the city.

—The community of Arlington Heights, in Ohio, has taken steps to separate its school district from Lockland and Cincinnati, between which it is now divided, and to set up an independent district of its own.

—Mansfield, Ohio. The junior and senior high schools have been placed on a one-hour directed study plan. The schools are organized on the 6-3-3 plan, with grades four, five, and six departmentalized.

—Mansfield, Ohio. Four out of eleven school buildings have been equipped for radio instruction. It is planned to extend the idea to other buildings during the next year.

—The Yearbook Commission of the Department of Superintendence, N.E.A., is seeking the aid of members of the department in gathering information for use in one of the chapters of the yearbook to be issued in 1931. The chapter deals with pupil-promotion problems, which takes up special forms of classification, and means for reducing pupil failure in the elementary and secondary schools.

—Three Sands, Okla. Visual education has been introduced as a special feature of the next year's work.

—Shenandoah, Pa. The school administrative staff has completed a summary and analysis of age-grade tables for pupils in the public schools.

—New Haven, Conn. The school board's committee on schools has undertaken a study of the proposed plan for dividing the city into school districts, for relieving the pressure on schools in the outlying districts. The plan is expected to relieve the present overcrowding in the city high schools, where double sessions and an extended school day have been resorted to.

1855 - SEVENTY-FIFTH ANNIVERSARY - 1930

**IT IS THE UNFORSEEN EXPENSE ARISING FROM INCREASED
MAINTENANCE OR COSTLY BUILDING REPAIRS
THAT THROWS SCHOOL BUDGETS OFF**



**AS FAR AS PLUMBING SYSTEMS GO, YOU CAN MINIMIZE SUCH UNFORSEEN
EXPENSES BY SELECTING CRANE QUALITY IN PIPING
MATERIALS AS WELL AS IN FIXTURES**

—Wilson, Pa. The office of superintendent of schools has been created in the Wilson school district, following a suggestion of Mr. Holmes Fornwalt, a member of the board. Mr. Clarence E. Furst, who is completing his second year as supervising principal will fill the new office. The new plan becomes effective on June 1, when the supervising principal's term of office expires.

—New York, N. Y. A coördinating committee, whose function it will be to act as a clearing house for ideas intended to improve the professional standing of the elementary schools, has been appointed by Supt. William J. O'Shea. The committee consists of five division supervisors, each of whom is in charge of a geographic section of the school system.

Under the plan, each division superintendent will hold conferences with the district superintendents in his division, and plans for the professional advancement of the schools evolved by teachers or principals will be reported to the central committee. In this way, educational experiments which have been conducted in a given school, district, or borough, and which have proved successful, can be called to the attention of educators throughout the city. The coördinating committee will make an effort to establish minimum scholastic standards for the city, a more uniform system of rating teachers, and a more uniform rate of promotion.

The committee will be a medium for the interchange of ideas. There is no desire on the part of the committee to effect a general standardization of either teaching or supervising methods throughout the city.

—Mr. A. T. Allen, state superintendent of public instruction of North Carolina, in a recent statement, called attention to the new avenues of knowledge which have become available through the use of the radio. A survey has been begun to show the degree to which the schools of the state have made use of the radio, the number of radio sets used in the schools, and the number of persons who heard live-at-home speeches over the radio.

The findings of the survey indicate that Gaston county leads all others in the number of radios

used. Durham and Wilson counties, each had eight radios in use in the rural schools, with 2,400 and 4,000 listeners, respectively. Among the city schools, Greenville, Leaksville, and Lexington each report four radios in use with audiences of 1,700, 1,750, and 2,000, respectively.

—Legislators on the Wisconsin interim committee on education launched their state-wide survey of school systems in Eau Claire on April 14, in connection with a study of the methods there. A second school system studied was at Stevens Point. The committee has sought information and views on the proposed central state board of education and on elected county boards of education.

—State Supt. John Callahan of Wisconsin has taken steps which may result in the establishment of radio instruction in every classroom of the state. The University of Wisconsin station WHA, following the method of the Ohio school of the air, is planning longer educational programs. County superintendents have made a selection of the subjects deemed most fitted for radio instruction, as a supplement to the work of the teachers.

—New York, N. Y. Supt. William J. O'Shea, in a recent report, shows that despite the fact that the city high schools have experienced an unusually large increase of 9,980 pupils in the last year, the number of short-time pupils in these schools has increased only 1,971.

The report further shows that despite an increase of 15,275 in the total number of pupils attending the city schools, short time has decreased by 3,332. In February, there were 1,048,011 pupils enrolled in the schools, of whom 67,753 were on short time.

In Manhattan, the elementary-school register decreased 9,227; the junior-high-school register, 500; the senior-high-school register, 5,819; and the industrial high-school register, 112. The total loss in the borough exceeded 16,000. No elementary or junior high school had part-time pupils, but there were 8,980 in the high schools.

The greatest gain in register was in the Queens elementary and junior high schools, which showed a gain of 6,377. The number on short time in-

creased 3,233. The high-school registration increased 2,545, but the number on short time decreased 3,105. There are 50 classes in the elementary schools with registers of 50 or more pupils, as compared with 65 such classes last year.

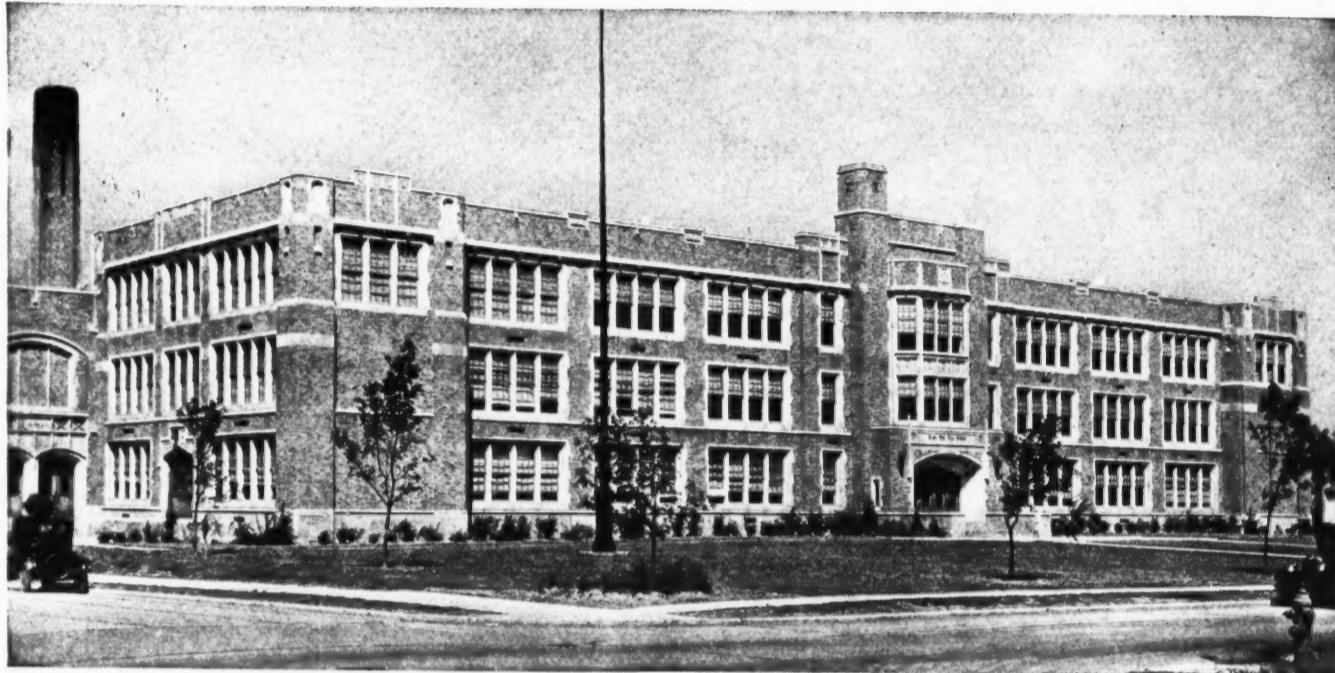
—The citizens of Byron Springs, Excelsior, and Byron, Calif., held a mass meeting recently for the purpose of unifying the schools of the three districts. A local newspaper says: "The day of the rural one-, two-, and three-room schools is practically passé — they have answered their purpose well, but are rapidly being relegated to the discard by the more modern trend to unify into larger bodies. It has been exemplified by actual experience that children educated in the larger groups receive far more benefits than those in the smaller

—The Canton Special School District of Canton, N. C., has been enlarged to include all of Beaverdam township in Haywood county. In the annexation proceedings, six small country elementary schools were consolidated to form two large units.

With the enlargement of the school district has come a need for additional school buildings. Two modern elementary schools, now in process of erection, will be ready for use in September. A new central high school will be erected to accommodate the high-school population of the township. A site of ten acres has been purchased to provide space for the building and athletic field, leaving 600 feet of river frontage.

In keeping with the policy under the old special charter district, no teacher holding lower than a standard certificate will be employed in any of the country schools. Teachers holding the lowest standard certificate will be given a limited time in which to raise their educational qualifications. In case of failures to make the necessary professional growth, such teachers will be replaced with others who meet the requirements.

The Canton school system, as at present constituted, comprises five large elementary schools, one one-teacher school, and one small colored school.



ROYAL OAK HIGH SCHOOL, Royal Oak, Michigan

Architect: Frederick D. Madison, Royal Oak

Heating Contractor: Drake-Avery Co., Detroit

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furnish Modern School Heating and Ventilation
in the ROYAL OAK HIGH SCHOOL

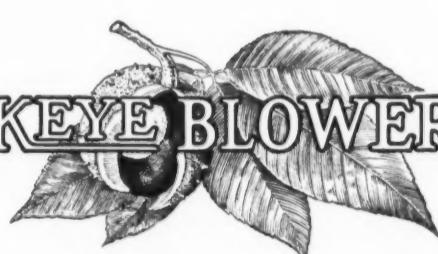
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BUCKEYE Heatovent Units are equipped with BUCKEYE ALL COPPER RADIATORS which freezing does not harm.

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CHICAGO CORRESPONDENCE

A legislative program to remedy the financial conditions of the Chicago public schools has been prepared by a joint conference of principals and teachers of the Chicago public schools. All candidates for the general assembly in the April election were quizzed as to their willingness to support this program, and their replies were announced to the 13,000 teachers and principals just before the primaries. Following is the program:

Preamble

The Joint Conference Holds:

(1) That the methods of taxation and of financing the school system of Chicago were never in such need of a thorough revision as now.

(2) That, since the educational groups have intimate knowledge of the needs of the schools, their advice and counsel should be used in any revision of the revenue and other laws affecting the schools.

(3) That sources of revenues, other than taxes on real estate, must be found if the schools are to function as an intelligent, progressive city demands.

(4) That no school system can function as it should, while, on account of lack of adequate financial support, the teaching load and the administrative load are increased from time to time by putting more pupils into a room and by reducing the amount of administrative assistance. Chicago now imposes a larger teacher and administrative load than any other city over one hundred thousand inhabitants in the United States.

(5) That no school system can prosper on salary schedules significantly lower than those paid for similar services in more advanced school systems.

(6) That we stand ready to assist in securing legislation and board action that will provide adequate permanent relief from the unfortunate situation in which the community now finds itself with respect to its schools.

Objectives Requiring Legislative Action

The joint conference therefore proposes that bills be drawn for presentation to the general assembly to secure the following objectives:

(1) That the constitution of Illinois be amended so as to make possible a revision of the revenue laws.

(2) That the general assembly shall provide a state school distributive fund for support of education in Illinois which shall be comparable to that now in force in the state of New York.

(3) That the general assembly shall revise the school law of Illinois so as to provide, outside of the larger districts, a larger territorial tax unit for purposes of local support of schools.

(4) That the general assembly enact legislation to provide some method of funding the present deficits of public corporate bodies in Cook county, and to place and maintain the expenditures of said bodies on a cash basis.

(5) That the general assembly enact legislation to keep the Chicago public schools open until permanent financial relief is provided.

(6) That the general assembly amend the provision of Section 189 of the school law to provide an adequate educational fund for school districts having a population of two hundred thousand or more, from which payments shall be made for the following enumerated purposes only: (1) Salaries of those engaged in instruction and supervision of instruction; (2) Teachers retirement pensions; (3) Supplemental payments required by the Chicago Public School Teachers' Pension Law; (4) Instruction supplies consumable during any current school year.

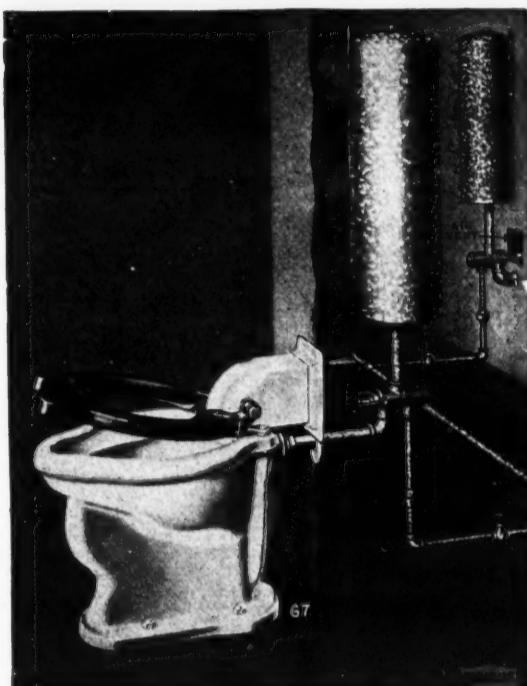
Besides the uncertainty and alarm of payless paydays, the teaching force is weary of what it calls the "overload, underpay" situation. The joint conference, through its committees, secured data from New York and elsewhere, and finds that Chicago has more pupils per classroom than other cities, yet a dozen cities pay their teachers higher salaries. For example, Chicago's 6,903 regular elementary teachers have an average of 45.7 pupils per classroom. The New York average is only 40.3 per classroom, and the New York teachers' maximum salary is \$750 more per year.

A special session of the legislature is to be called to reform the school revenue laws. Budget requirements and protection against lavish expenditures should be coupled with revenue relief for the schools. However, the teaching force wants to be assured that before too severe restrictions are clamped down, this "overload, underpay" condition will be remedied. Otherwise, it will be fastened on Chicago to the permanent detriment of the schools.

Every year Chicago's 24 senior high schools participate in a basketball tournament for the city championship. The tournament is divided into two parts, the heavies and the lightweights. This year Wendell Phillips high school, the only colored high school in the city, was a finalist contender for city championship honors in both divisions. Wendell Phillips won the heavyweight championship, but was beaten in the finals of the lightweight division.

Following the championship lightweight game held at Bartlett Gymnasium on the University of Chicago campus, a riot ensued. The newspapers carried stories to the effect that partisans of the Wendell Phillips team after leaving the gymnasium captured several street cars, ejected the other passengers, and clambered aboard. Responding to

—ideal for schools



a riot call, the police soon restored order and arrested one fellow who was carrying a revolver.

Although champion of Chicago, Wendell Phillips was not invited to participate in the National Basketball Tournament held by Coach Stagg early in April. The charge was made in letters to the newspapers that discrimination was made because Southern teams would not play against a colored team, and many Southern teams were entered. In fact, three of the four semi-finalists in the national tournament, including the winner, Athens, Texas, were from south of the Mason-Dixon line. The University officials are said to have explained their refusal to invite the Chicago champions on the grounds of a penalty for the riot following the game at Bartlett Gym.

Considerable publicity has been given to reports purporting to show that expenditures in the Chicago school system are lopsided as between instruction and operation. Dr. Nelson B. Henry, professor of school finance at the University of Chicago, has been crusading for a better apportionment of the funds. He has stated publicly that in 1926, 80 per cent of current expenditures were for instruction, and 10 per cent for operation, and in 1929 these percentages had been shifted to the extent that only 68 per cent of current expenditures were for instruction and 16 per cent for operation. He says that only a wrong sense of values could permit such a shift in emphasis from the fundamental service of a school system to the incidental service of that system. As a remedy, he proposes that the superintendent of schools should be made the supreme head of the school system, instead of being simply one of three heads, a coördinate arrangement whereby the business manager and the attorney have equal power with the superintendent.

The *Chicago Tribune* printed a series of articles supporting the stand of Dr. Henry. One article by a *Tribune* feature writer, shows that last year, Chicago spent \$83.97 per pupil on instruction, and \$17.49 on operation, while New York City spent

(Concluded on Page 152)

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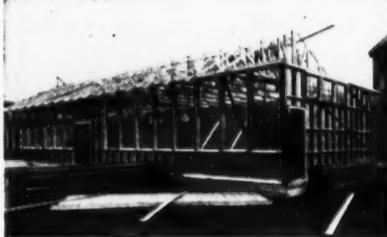
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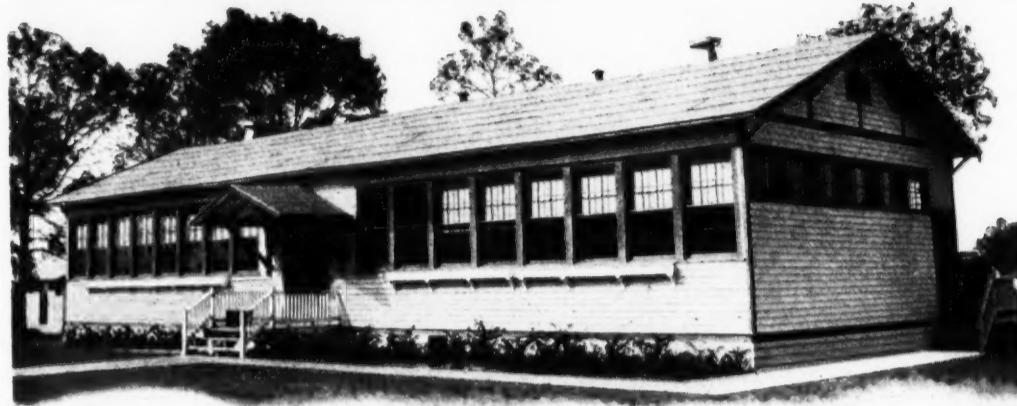
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DETROIT

(Concluded from Page 150)

\$114.00 per pupil on instruction and \$8.82 on operation. (Dr. Henry has taken these same figures and shown that New York spends \$12.93 on instruction for every \$1.00 spent on operation, whereas Chicago spends only \$4.59 on instruction for every \$1.00 spent on operation.) In another article, the *Tribune* stated that a survey conducted by a committee from the building managers' association at the request of the board of education showed that there are 723 unnecessary jobs in the operative department of the school system which pay an average wage of \$2,008 per year, or a total of \$1,452,000.

Teaching is usually regarded as one of the least hazardous professions. Recent events have tended to overthrow that notion.

One of the principals of a north-side elementary school went out on the playground during the noon hour and asked several neighborhood boys, about 17 to 20 years of age, to leave—in conformity with the school rule. They refused, so the principal called the engineer who is commissioned with police authority. The boys set upon the principal, the engineer, and a janitor, and the school authorities were badly worsted. The principal was knocked out, three teeth chipped, and he will always bear scars on his face. The police later arrested two of the boys. One was sent to St. Charles Reformatory and the other was placed under bonded probation.

One of the women principals of a south-side school underwent a harrowing experience during the month. A girl pupil became enraged and attacked her. The principal was knocked down, and her nose broken. The engineer pulled the girl off the principal but she bit a chunk out of his cheek. The girl is under observation in the psychopathic ward of the detention home.

Coincident with the preceding affrays was an attack on a teacher of another elementary school by the mother of one of the pupils. The schoolboy held the teacher, while the mother "beat her up." The boy was sent to the Parental School and the mother's case is pending in court.

There have been several other attacks on princi-

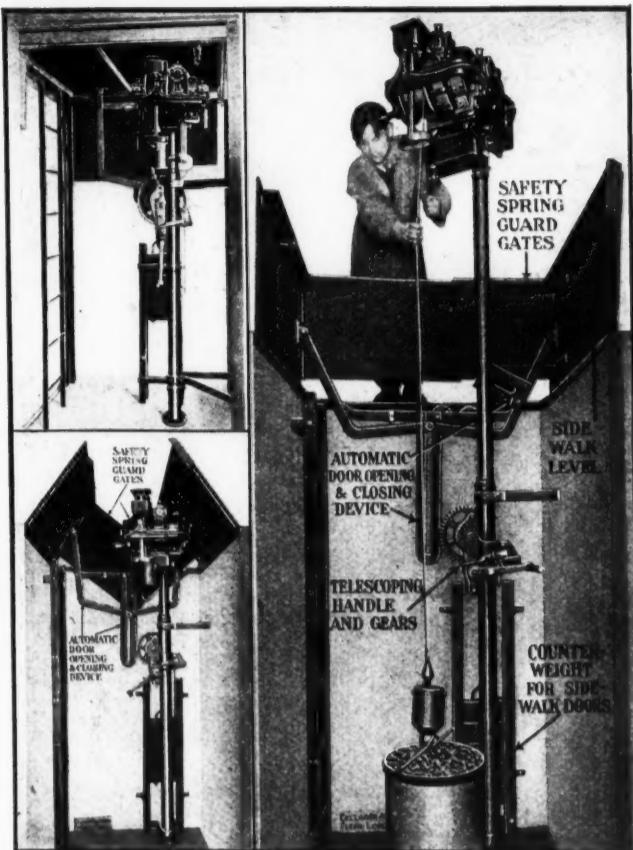
pals in the past two or three years. One principal had his head cracked when he attempted to chase a gang of young hoodlums off the playgrounds. Another was beaten badly by a gang of over-age roustabouts who invaded his school on the occasion of an evening entertainment, and he had to wear aluminum braces for over a year. A woman prin-

cipal was attacked, and had two ribs broken, by an irate mother.

In all of these instances the culprits were punished, but nevertheless the troubles continue. Instead of being a preferred risk, insurance companies may soon be classifying teaching along with aviation, railroad switching, and other hazardous professions.



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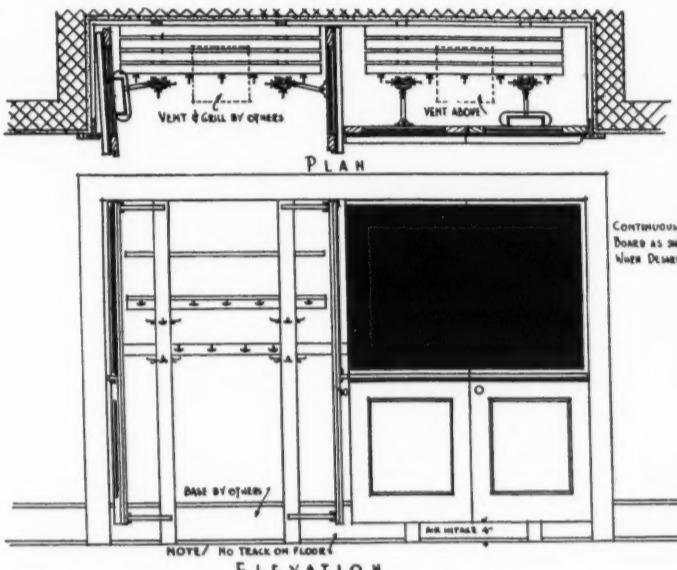
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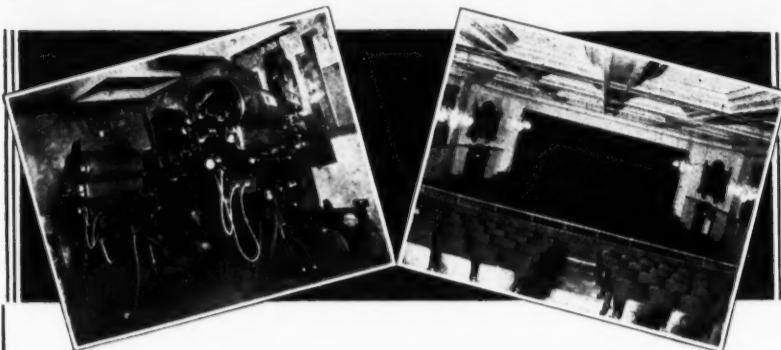
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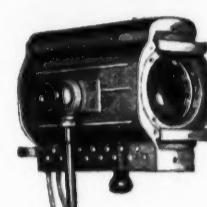
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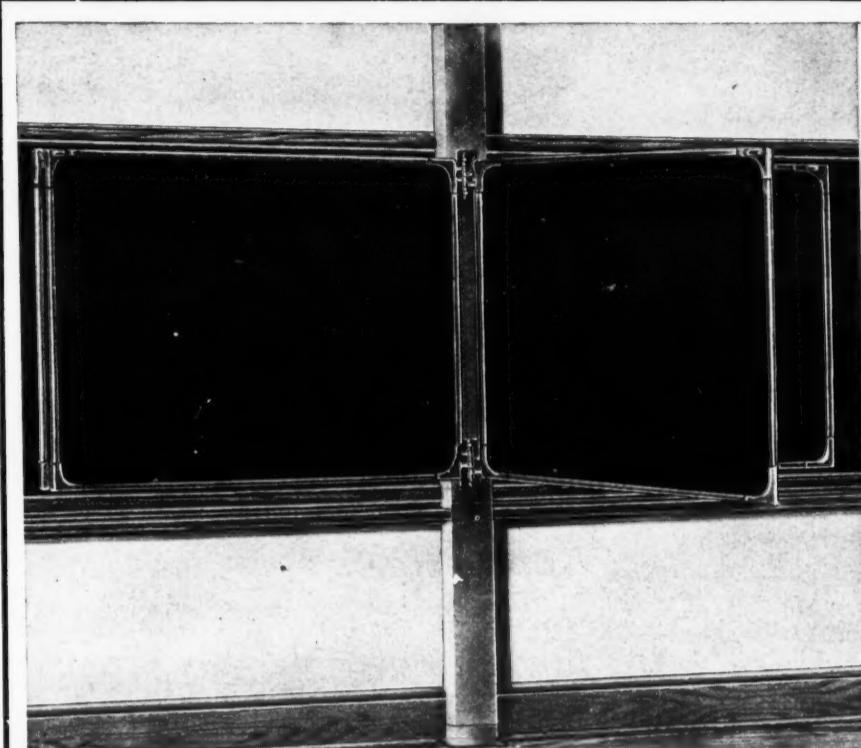
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School-Board News

—Minneapolis, Minn. The school board has voted to work independently for the operation of a summer school for the training of janitor-engineers. It was pointed out that Dunwoody Institute had refused to join in a proposed coöperative plan for a janitor's training school.

—St. Louis, Mo. The board of education has received an offer from certain motion-picture interests to take a 99-year lease on the site of the board's seven-story headquarters building. The estimated cost of the proposed structure is \$3,300,000, and the lease is based on the valuation of the property.

—Minneapolis, Minn. The proposal that the school board move from the city hall to rented quarters has been abandoned. The board notified the city officials that they did not desire to make a change at this time.

—Columbia, Mo. The citizens' committee, an organization of men and women of the city formed recently, has been making a study of the status of the city schools, with a view of making recommendations as to what candidates to support in the school-board election.

—Minneapolis, Minn. The school board has voted to retain the five-day-week working schedule for shop employees.

—Detroit, Mich. Under a new ruling of the board of education, no persons of foreign birth who have not taken out their first citizenship papers may be employed in the schools in the future. In accordance with this policy, alien employees in the noneducational department, consisting of single men, were dismissed on April 30. In the case of heads of families, such employees will be dismissed on June 1, following a revision of the cases by the school board.

—Akron, Ohio. Vaccination against smallpox has been required of children attending the public schools and employees of the schools, under a rule recently adopted by the board of education. The rule which was passed by a vote of 5 to 2, had been bitterly opposed by a certain group of citizens opposed to vaccination.

—St. Louis, Mo. Upon the suggestion of Supt. H. J. Gerling, the school board has voted to add the fourth rank to the salary schedule for the instruction department. The schedule is as follows:

First year, \$960 per annum; second year, \$1,020 per annum; third year, \$1,080 per annum; fourth year, \$1,140 per annum. The position of substitute clerk has been created, at a rate of \$3.50 per day for service rendered.

—Newburyport, Mass. The school board has voted to insure the school boilers, at an expense of less than \$300 for a period of three years. It is estimated that a substantial saving will be effected as a result of having the state inspect the boilers. The city will receive proper coverage for accident and regular inspections will be included. The insurance policies will be suspended during July and August when the boilers are not in use.

—Dr. J. L. Clifton, state director of education for Ohio, in a recent communication to school boards of the state, suggests that they purchase Ohio coal. He pointed out that the purchase of Ohio coal would relieve the employment situation, and that the coal could be purchased cheaper, due to the low freight costs. The appeal was made on the basis of quality, as well as price, and loyalty to a state industry.

—Detroit, Mich. A proposal to discharge all school teachers who are not citizens and those who are not residents of the city has been rejected by

the board of education. A recent survey showed that 786 teachers do not live in the city.

—Muskegon, Mich. Mr. H. H. Linn, business manager of the school board, has made an appraisal of all the school buildings as a basis for a new insurance plan. It was found that all of the school buildings had been insured for more than the cost of replacement. It is expected that the annual cost of insurance will be reduced by about \$3,000.

—The school board of Cedar Rapids, Iowa, has been asked to approve a teachers' pension and annuity retirement system. The proposition was approved by the voters at the annual spring election. The resources of the fund, under the plan, will be derived from a one per cent assessment of teachers' salaries, and a general tax levy of one fifth of a mill.

—Swampscott, Mass. Teachers and pupils of the Hadley School have been prohibited from parking cars in the school yard between the hours of 8 and 12 in the morning.

—Lynn, Mass. The school board has begun a study of fire-insurance rates for school auditoriums. The study was begun as a result of the board's decision to allow the public to use the auditoriums of the city schools. The use of school halls for dramatic affairs may be prohibited because of a state law forbidding the use of scenery and curtains on the stage.

—East Cleveland, Ohio. City Manager C. A. Carran has appointed two men to act as traffic guards for school children. The traffic guards will relieve policemen for other duties. The men are under civil service and work four hours a day.

—Lynn, Mass. The school board has ordered that the school-supply clerks carry the cafeteria money from the schools to the office of Deputy Supt. Ernest Stephens. The change was made because it was feared that the women supervisors of the lunchrooms would be waylaid by robbers. The women have been accustomed to collect the receipts, which sometimes mount into hundreds of dollars.

—Youngstown, Ohio. In line with a new economy policy, the school board has effected the first

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combination of two schools under one principal. Mr. E. F. Hetzler was placed in charge of the Market and Garfield Schools, while F. W. Sexton was given the Taft and Bennett Schools.

FINANCE AND TAXATION

—A \$600,000 school-bond issue met with defeat at Elgin, Ill. More than 7,500 votes were cast. Of these, 4,800 were recorded against the bond issue. A newspaper comment gives the cause for defeat as follows: "With a large majority of Elgin people owners of their own homes, with many of them either out of work or working part time, and with business conditions in general unsettled, even though the outlook is favorable for the resumption of prosperity, it was almost plain enough for anybody to see that the people were not in the frame of mind to favor a big bond issue."

—Chehalis, Wash. The school board has effected a saving of \$2,300 through changes in the school personnel.

—The schools of Iron county, Utah, are facing a serious financial situation because of the excessive delinquent taxes this year. The superintendent has estimated that \$10,000 of the \$19,000 due the school board from delinquent taxes will be required to complete the school year.

—Little Rock, Ark. The school board has disposed of a \$500,000 school-bond issue, at a price of \$101.60, to net 4.61 per cent interest. The premium amounted to \$8,000.

—The school board of Hamilton county, Tenn., has increased its school budget for the year by \$15,000. The increase is due chiefly to teachers' salaries which will amount to \$416,728, or \$15,000 more than last year.

—Kansas City, Mo. The school board has taken up the proposal to repeal a ruling which requires teachers to reside within the city limits.

—The Arkansas state board of education has approved new regulations for the administration of the equalizing fund for the state schools. Approximately \$1,000,000 will be distributed as state aid to needy districts in maintaining standard schools. Under the rules, aid will be extended to the districts on the basis of the service rendered. All dis-

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tricts are required to vote the maximum of eighteen mills school tax before aid will be given. No aid will be given to school districts which are able to maintain an eight-months' school.

—The city council of Detroit, Mich., has indicated that it will slash at least \$1,000,000 from the school board's total appropriation for schools next year. The original budget totaled \$39,563,640, which was reduced by the mayor to \$32,971,578.

—Keene, N. H. The school board has adopted a budget, calling for an appropriation of \$228,018 for the next school year.

—Norfolk, Nebr. The board of education has refunded \$225,000 worth of school-district bonds at par, with 4 1/4 per cent interest, and a service charge of \$1,709.50, optional at the end of five years and due in fifteen years.

—All but one of the education bills affecting the school system of New York City died in the Senate when the education committee voted not to report them. A bill by Senator Crawford providing for a board of guidance to assist in supervising continuation schools was reported favorably.

Among the bills which were killed were the superintendent's bill, abolishing the board of superintendents; the merit bill, providing for appointments to executive positions from a list of candidates certified from competitive examinations; a bill fixing by legislative order the salary schedules in effect in New York, and a bill equalizing the salaries of principals in graded schools.

—St. Louis, Mo. Mr. M. A. Rollins, a member of the school board, has asked Supt. H. J. Gerling for data on schoolhousing conditions. The information is to be used in suggesting measures for the relief of overcrowding in some schools, and for utilizing vacant rooms in others. Attention was called to the fact that many pupils attend classes in portable school buildings, and that some grade schools have inadequate facilities.

REFORMING CHICAGO'S SCHOOL SYSTEM

Dr. Jerome G. Kerwin, professor of political science of the University of Chicago, diagnosed the Chicago school muddle and cited some requisites for bettering the situation as follows:

A school board detached from the city hall. People do not understand that the board is not a city, but a state group, not accountable in any way to the mayor, who acts merely as the representative of the state in making appointments to it. All the political patronage exercised by the city hall in the matter of the board of education is absolutely without legal foundation. The jolt the city hall needs can be administered by revising the law so as to make the board an elective body, elected at a time when no other candidates are before the people.

A school fund limited only by state law and economically administered. The elective board should be recognized as having the right to levy taxes for maintenance of the schools. The present board, if it desired, absolutely could refuse to be used as an agent for lavish expenditures on janitors and in the award of undesirable contracts.

A greatly strengthened superintendency. There should be no appointment whatever in the educational staff except on recommendation of the superintendent. The board of education should have no appointive power except the power to veto.

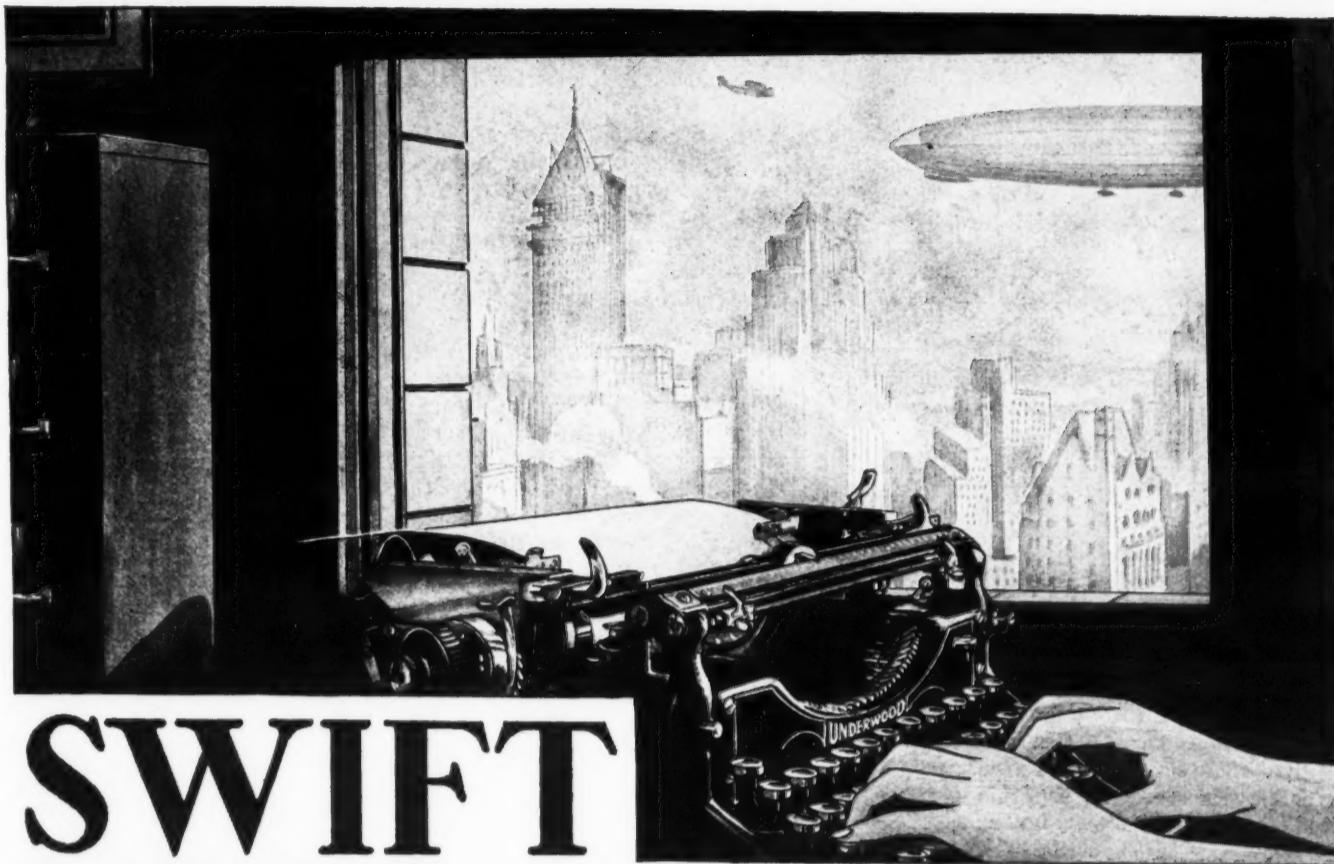
A financial organization which knows how to operate on the basis of a balanced budget. If any private business were confronted with vague statements about financial status remotely like the statements which come from officials of the school board, the stock of that business would have to be withdrawn from any well run stock exchange.

A CORRECTION

Mr. Murray A. Dalman, whose paper "The Problem of Housing Schools" appeared in the April issue of the JOURNAL, is educational advisor to the firm of Perkins, Chatten and Hammond, architects. Mr. Dalman is not, as might be inferred from the initials which appeared erroneously back of his name, an architect.

COOPER CORPORATION REMOVES OFFICE

The Frank Irving Cooper Corporation, architects, have moved their offices from 172 Tremont Street, to 47 Winter St., Boston, Mass.



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In the whirlpool of modern business, time is an important factor. Things must be done quickly. Every minute counts. Skyscrapers are built "overnight", the ocean is crossed in a week-end, the continent in a few hours. Speed is the accepted creed of the present age. Keeping pace with the new demands and rapid strides of commerce, the UNDERWOOD has moved steadily forward,—improving in mechanical operation so that it could do better work with greater speed. Always it has held the faith of existing standards,—contributing its light, swift keys to World progress. That is why this great machine has been rewarded with World leadership. Ask your nearest UNDERWOOD Office for a demonstration today.



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Book News and Reviews

THE SELECTION OF TEXTBOOKS

(Concluded from Page 53)

too long in one illustration; that the proprietress of a certain private school refused to let her young girls look at a third-grade reader until an illustration of a harmless boy in a bathing suit was redrawn by putting him into waist and pants and a new edition actually printed with the urchin in street clothes; and, perhaps as astounding as anything I have heard, that a textbook commission in a certain ultra-fundamentalists Protestant region peremptorily demanded the rewriting of the time-honored "This is the House that Jack Built" in a book of Mother Goose Melodies to eliminate the line, "This is the priest all shaven and shorn!" Whether they would have been satisfied to have it written "This is the Protestant clergyman" shaven and shorn, I regret I cannot tell you.

Certainly the authors and publishers of school textbooks will bless the day, if ever it comes, when the training given by you gentlemen through your teachers will have made tolerance one of the common virtues.

8. Up-to-Dateness on Fads. Another item that theoretically never appears on the specification sheet, but that would have to be inserted there to aid the deliberations of some selection committees, would be headed (if I fixed up the specifications) *Up-to-Dateness on Fads*. The questions would run: "Is this book thoroughly up-to-date? Does it embody the very latest, most advanced thought? Is it *t-r-u-l-y PROGRESSIVE?* Just what these questions might mean would have, of course, to be left to their propounders. For one, they might mean: "Is this book based on the unit plan?" If the book agent were there and if he were clever, he could say: "At present, madam, it is divided into chapters, but I can have a special edition made for you, changing the word 'Chapter' into 'Unit' if you wish." To which the lady would, of course, have to reply: "Oh, thank you; that would meet what is to me the only serious objection to this textbook." To another, "Is it truly progressive?" might mean: "Is the book positively guaranteed not to have any fairy stories whatsoever in it?" This might stump an agent who was not resourceful; he really ought to come back with some such statement as: "The authors of this reader have been very ingenious; they have utilized the core of the old fairy stories, but the stories have been completely modernized and have been carefully checked to remove all elements of romance; they are guaranteed to be so correlated with life situations as to meet thoroughly the felt needs of the present day in your own wonderful city," — and so on ad nauseam.

The Mighty Copyright Date

9. The Copyright Date. My eighth, perhaps somewhat whimsical, criterion of selection does have the excuse at least of introducing us to a ninth criterion made of sterner stuff — I refer to the up-to-dateness of the textbook in a very literal sense, its *copyright date*. This is a matter painful to all authors and publishers. Why, they want to know, cannot selection committees exercise just elementary common sense and thus relieve the situation of its absurdities?

The fact is that a fresh copyright date may properly be regarded by a selection committee as an item in favor of a given textbook, only provided the book deals with subject matter in which important advances have been recently made and only provided the book incorporates these advances without exhibiting inferiority to

older competing books in other respects. To suppose a book must be better than other books solely because it is hot off the presses is just nonsense. Textbooks are not in the stage of development of the automobile of half a decade ago when the advent of such radical improvements as balloon tires, four-wheel brakes, lacquer finishes, and the like made any car obsolete in a couple of years.

Do I need to argue the absurdity of a rule made by the school board of an important city, according to which no textbook should be considered the copyright date of which was more than two years old? The absurdity of this regulation can be paralleled only by the stupidity of officials who put the rule into effect by canceling an order for Professor G. H. Palmer's *Translation of Homer's Odyssey* because the translation had been published five years! What do these people do when they come to order Bibles — if they use them?

These nine points, nine items, or features are not all the points, but they are some of the more obvious ones that are considered when selecting textbooks.

IV. Are Score Cards Useful?

A natural question arises at this juncture: Is it desirable to arrange these points on a card, to systematize them, add others like them, assign numerical values to show relative significance, and thus create a *score card for textbooks?*

Those who have had experience with such cards seem to be in favor of them, but qualifiedly so. The score card, they will tell you, helps to keep before you the points to be observed; it enables you to keep a record of your judgment; it enables you to compare your judgments with those of another person and perhaps thus to correct the meaning that each of you is attaching to the criteria. On the other hand, a score card may give an appearance of exactitude where exactitude is not present or not possible or not wanted. Again, the score card may not be flexible enough to balance off credits and debits as the scorer would like to do. Again, the scorers may not agree at all on the weighing to be given to different items. I think on the whole I would favor a simple score card. I would be critical of the score cards provided by some publishers with their own product neatly scored and with inviting traps for the scoring of their competitors' wares.

Such simple score cards, just check lists of items, provided with clear explanations of each item, have been used to advantage — for example, by committees of teachers in Los Angeles in analyzing social studies textbooks; and sometimes actual measurements of features like illustrations, number of graphs, percentage of space given to charts, etc., have also been used to advantage — for example, by other committees of teachers in Los Angeles in appraising textbooks in junior-high-school mathematics.

V. Should Teachers Select Texts?

Reference to this use of check lists of criteria by teachers' committees at Los Angeles raises the question often asked by superintendents: "Should teachers select texts?" This is the sort of question that cannot be answered by an unqualified "yes" or an unqualified "no." In some communities, for example, the board of education may be legally charged with the selection of textbooks. Often, even in these communities, the board is wise enough to leave the selection almost entirely to the superintendent or perhaps to the superintendent and the high-school prin-

cipal. The wise superintendent will surely wish to get advice from his competent principals and classroom teachers, because the test of the text lies ultimately in its classroom efficiency. This brings me to my final point.

VI. How Many Textbooks Should Be Selected?

As I said in my opening paragraph, modern textbooks, as a rule, are excellent; at the same time, they differ from one another in scope, organization, presentation, and so forth. Why, then, prescribe the same text even for all the schools in the same city or for all the pupils in the same school? Experts agree that a variety of texts should be at the disposal of teachers and pupils, even if one text must be officially adopted as basal. Before making a final selection, let teachers try different texts; then arrange a series of conferences at which the comparative merits of the several books as revealed in use may be presented and discussed. Then, if only one of them may be officially selected, it may be possible, nevertheless, to provide for reference and supplementary reading numerous copies of the other texts that seem meritorious. Some such plan of selection would have the advantage of basing the decision on the acid test of experience, of acquainting teachers with several series of books, and of enriching the materials of instruction.

NEW BOOKS

Plays with a Purpose

Edited by Jessie A. Knox. Boards, octavo, 141 pages. Price, \$1.50. Lakeside Publishing Co., 468 Fifth Ave., New York City.

While these one-act plays are intended for home-economics classes in particular, they will be found generally useful for assemblies and school entertainments.

Our Financial System

By Albert S. Keister. Cloth, 494 pages. Price, \$2.40. The Macmillan Company, New York, N. Y.

This book deals with the subject of money. It tells the student why money is employed in the transaction of business, and what money really means. The gold standard as a stabilizer of money, and the use of paper money are explained.

The author then familiarizes the student with the financial policies of a business, with financial instruments and their use, and with financial institutions. Thus, the function of the several kinds of banks, building and loan associations, bond houses, trust companies, insurance companies, and the stock market, are elucidated.

The book contains the essential information regarding money and finance, which ought to be in the possession of every person. It is quite conservative in its viewpoint, but it points out clearly the present problems, tendencies, and underlying principles necessary for personal and business use.

Vocational Mathematics

By Edgar M. Starr and Edwin G. Olds. Cloth, 184 pages. Price, \$1.25. Published by P. Blakiston's Son & Co., Philadelphia, Pa.

This vocational arithmetic covers a wide field and contains a great many problems.

Chapters on formulas, logarithms, plane trigonometry of the right triangle, and curve plotting have been made a part of the book. The treatment follows well-accepted traditional lines.

Modern Methods Speller

By George C. Kyte. Cloth, 92 pages. Price, 56 cents. Silver, Burdett & Company, New York, N. Y.

A book based on recent research in word selection to meet the needs of both the adult and the child. It includes at the beginning of each year's work an explanatory note for the teacher on how to teach the subject and an appeal to the student, showing him why he should study spelling. The book is carefully balanced and splendidly graded.

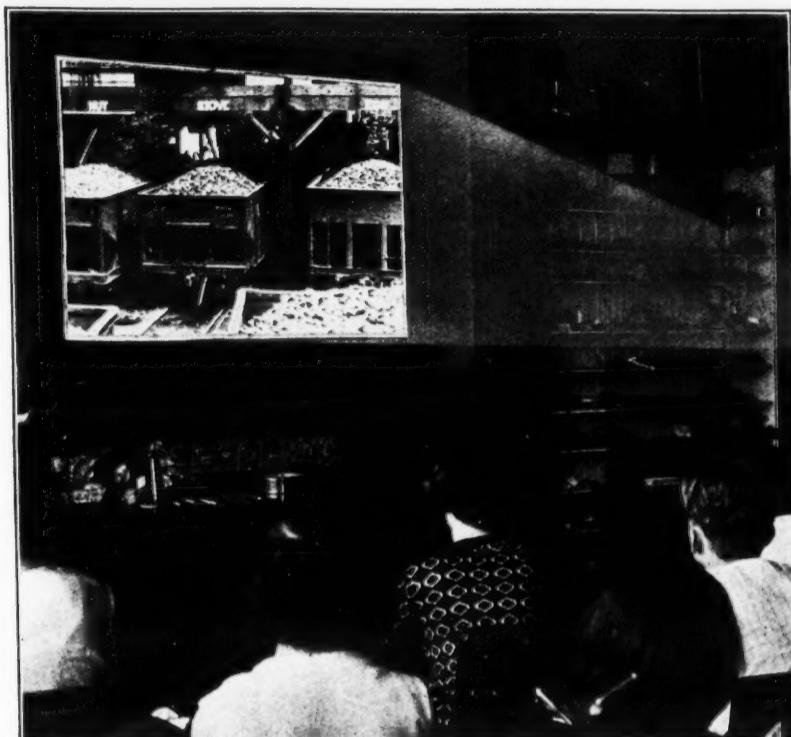
The development of the word list is especially attractive. For each week of the year, a column of words especially suited for the experience and scope of the child from the first to the eighth grade is recommended for study.

The Clapp-Young English Test — Forms A and B
By Frank L. Clapp and Robert V. Young. Houghton Mifflin Co., Boston, Mass.

(Continued on Page 160)

Your pupils can't spend a day in a coal mine...

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These, and many other scenes, pass before the pupils' eyes. Eventually the miner comes up the shaft. He has spent a long day below, but the class has been given the whole story of his work *in a quarter of an hour*. In fifteen hours of reading...even in fifteen hours actually spent in the mining district...the children could not cover the subject so thoroughly, or with such complete concentration, as it is covered with the aid of this special school film.

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- 5 Draft Control and Combustion
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- 7 Heat—Expansion and Conduction
- 8 Convection and Radiation
- 9 Hydrogen and Composition of Water
- 10 Ice, Steam, and Boiling Water
- 11 Density, Purification, and Water Supply
- 12 Temperature, Air Pressure, and Humidity
- 13 Winds and Weather Observation
- 14 Food, Diet, and Digestion
- 15 Leaves, Flowers, and Plant Study
- 17 Yeast, Mold, and Bacteria
- 19 Constellation and Star Study
- 21 Magnets and Magnetism
- 22 Electric Bells and Bell Wiring
- 23 Cells, Storage Battery, and Electroplating
- 24 Current Measurement and Control
- 25 Electric Motor and Power

LUNT & HALEY

(Continued from Page 158)

This material provides a group of self-marking tests for capitalization, punctuation, word form, and grammar. It contains a list of "grade standards" and "age standards" and forms for determining validity, reliability, and standardization. The material includes directions for giving and scoring the tests, material for diagnosis of pupils' errors, and other information. In the test proper are given directions for conducting the test, for marking, and for filling in the blanks. By a clever arrangement, the tests are genuinely self-marking.

Luria-Orleans Modern Language Prognosis Test

By Max A. Luria and Jacob S. Orleans. Price, \$1.30. World Book Co., Yonkers, N. Y.

The high percentage of failure in languages has led to attempts to devise means of foretelling what success pupils will have in studying a modern language. The present test aims to meet the need of determining the ability of the student to handle situations he will meet in a study of the language; his knowledge of English grammar and other information necessary for learning a language; his school habits, regularity of work, attentiveness in the classroom, originality, and perseverance; environmental factors that influence his school-work, and other factors.

The test should prove an invaluable aid in grouping and advising students. It is scientifically constructed and evaluated, and predicts accurately the success students may be expected to make in the study of French, Italian, and Spanish. The material includes a manual of directions, an outline of the test with instructions to the teacher, a key, and a class record.

Modern School Arithmetic

By John R. Clark, Arthur S. Otis, and Carolina Hatton. Book III. Cloth, 402 pages. Price, 88 cents. World Book Co., Yonkers, N. Y.

Practically all recent progress in the content of arithmetics has been confined to (a) emphasis on number combinations which are difficult, and (b) a closer relation of problem material to present-day life in the home and in business. Simple as these changes may seem in a bare statement, the changes caused in recent arithmetic texts have

been far-reaching. The present book, for seventh- and eighth-grade use, reviews fractions and denotes the greater space to ratio, business practice, measurement, graphs, etc. Much emphasis is laid upon understanding problems and applying reasoning in terms of numbers and number relations to problem solutions. Diagnostic tests, and remedial drills, are features of the review sections.

State Certification as a Factor in the Training of Elementary Teachers-in-Service

By W. A. Yeager. Cloth, 354 pages. Published by the Kutztown Publishing Co., Kutztown, Pa.

This study takes up in detail the various plans used in Pennsylvania for training teachers who are in the service. The author is quite frank in commending, as well as condemning, features of the legal and customary practices of his states. College work in residence is in his opinion the most valuable of all the numerous means employed.

Elementary Science

Book I. By Ellis C. Persing and Elizabeth K. Peeples. Cloth, 128 pages. D. Appleton & Company, New York, N. Y.

How early in a child's life shall an effort be made to acquaint him systematically with the wonderful world in which he lives? The authors of this book hold to the thesis that the child's education in science and nature shall begin as soon as he learns to read. They would relate the study of natural phenomena, which the child can understand, with all his other school studies. They would use stories, dramatization, verse, and games as entering wedges for arousing interest and holding attention. The present book for the advanced first grade and the beginning second grade is built up on these principles. It is rather a joyous book, mainly for silent reading. It readily lays the foundation for the later books which grow less and less informal and playful as they progress to the junior-senior-high-school level.

Dickens' Tale of Two Cities

Edited by Carolyn P. Timm. Cloth, 42 + 395 pages. D. C. Heath & Company, Boston, Mass.

The editor has very cleverly rearranged the story in chronological order, without disturbing any of

GENERAL SCIENCE demonstration UNITS

Each "UNIT" consists of a complete apparatus outfit and two copies of an illustrated teachers' manual. Each unit of work is developed by a series of convincing demonstrations on related topics. The apparatus for each unit is shipped and stored in a portable steel cabinet, thus eliminating the need for expensive storage cabinets. From 10 to 25 experiments are provided for in each unit. Prices range from \$29.00 to \$92.50 per unit. Prices include all needed replacement material for a minimum of five years' use. Check the units which especially interest you and send this sheet to us. Free sample manuals with prices will be mailed at once. There is no obligation.

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the text except for a few minor simplifications. The introduction discusses the French Revolution and presents a most sympathetic and useful sketch of Dickens' literary works. The teaching aids consist of thought-provoking questions and carefully studied projects for study and theme writing. One rather misses explanations of French terms and historic and literary allusions. The novels recommended for collateral reading contain several titles distinctly not suited to children.

The Normal Diet

By W. D. Sansum, M.D. Cloth, 134 pages. Price, \$1.50. C. V. Mosby & Company, St. Louis, Mo.

This is the third revised edition of a deservedly popular statement of the fundamental principles of diet for the mutual use of physicians and patients. It is distinctly addressed to adults, and teachers will find it useful.

Wonder Flights of Long Ago

Edited by Mary E. Barry and Paul R. Hanna. Cloth, 228 pages. D. Appleton & Company, New York, N. Y.

Modern man's achievements in conquering the air and in attaining a mastery of mechanical means of flight, more thrilling than the wildest dreams of antiquity, have renewed interest in the imaginative literature of flying. The pupils of the intermediate grade of a famous experimental school have during three years collected the best of the olden stories—Dedalus, Icarus, Phaeton, Perseus, Sinbad, and others—and the editors have rewritten them in a most appealing form. Suggestions for dramatization, word study, science study, etc., round out the teaching suggestions.

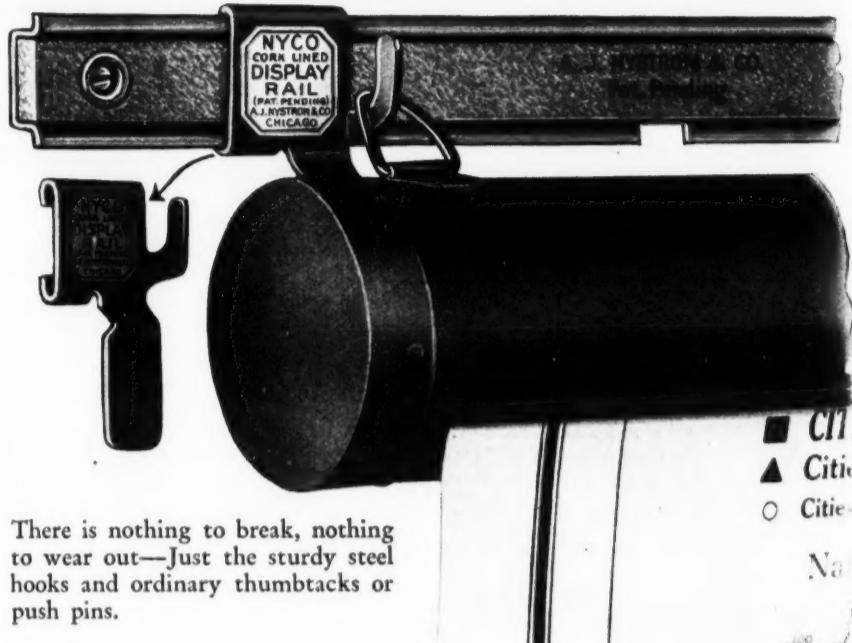
General Metal Work

Alfred B. Grayson. Cloth, 206 pages, illustrated. Price, \$1.70. Published by D. Van Nostrand Company, Inc., New York City.

This text provides a rather complete course in sheet-metal and bench metal work for boys at the junior-high-school level. Processes, tools, and machines are described, and application of the facts and principles is made to a series of practical projects. The book is carefully organized, and entirely teachable.

(Concluded on Page 163)

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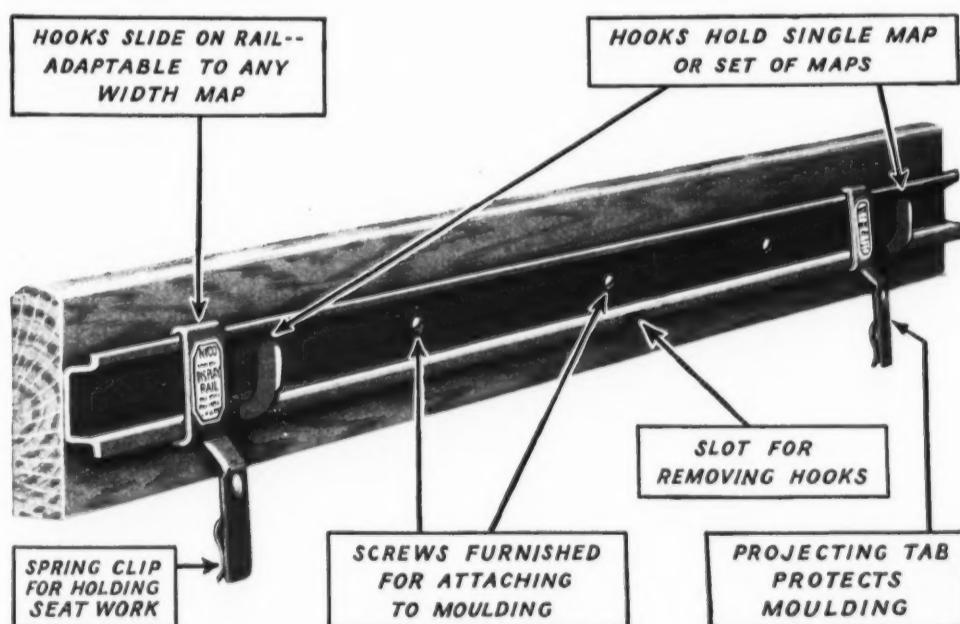
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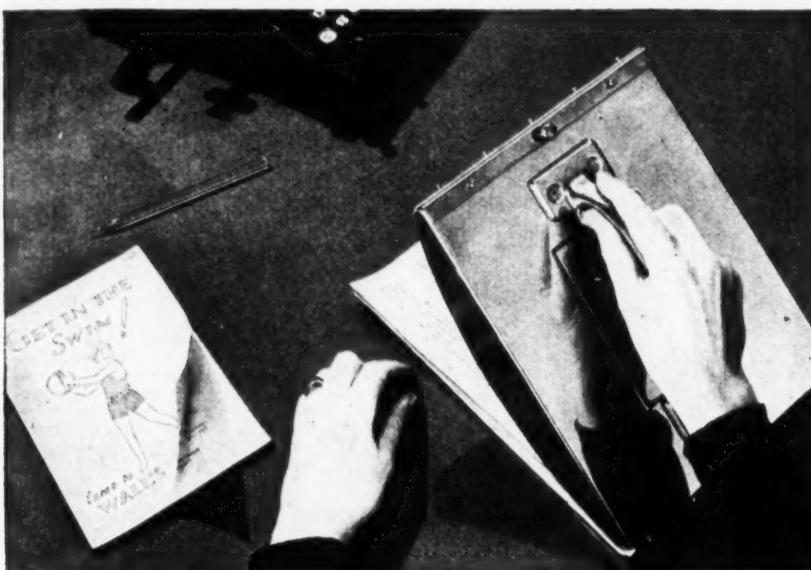
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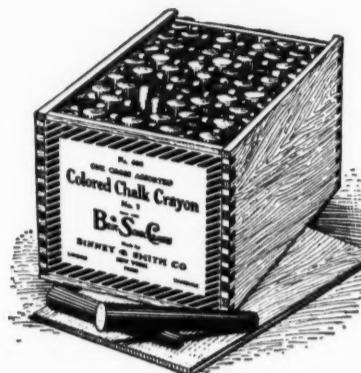
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(Concluded from Page 160)

Busy Carpenters

By James S. Tippett. Cloth, 88 pages. World Book Co., Yonkers, N. Y.

Quite as charming and fresh as the author's *Singing Farmer* is this little reader with its building activities, its description of city life, and its rhythmic story forms. Second-grade teachers will find that it is equally useful for rapid reading, exercises, and for reading with pure enjoyment.

Survey of College Entrance Credits and College Courses in Music

Prepared by the Research Council of the Music Supervisors National Conference in co-operation with the National Bureau of the Advancement of Music. Cloth, 210 pages. Price, \$2. National Bureau for the Advancement of Music, New York, N. Y.

A survey of the growing practice, in some 600 junior and senior colleges, in giving credit for music study at the secondary-school level.

A Sewing Manual

By Grace Fowler and Ada Alexander. Paper, padded, 189 pages. Price, \$1.40. The Macmillan Company, New York, N. Y.

This book offers a complete course in dressmaking and costume design for girls at the high-school level.

Standard Service Arithmetic Flash Cards

By J. W. Studebaker, F. B. Knight, and W. C. Findley. Sets one to six. Scott, Foresman & Company, Chicago, Ill.

The teacher who has once used these flash cards for teaching the basic number facts, and has enjoyed the benefit of their time-saving qualities will be unwilling to go back to the old type of printed or home-made cards. The serial arrangement is based upon long experiment and experience, and utilizes the later scientific studies of difficulty in number arrangement. The larger class cards will serve for any average class group; the individual cards solve the problem of special work for the slow child. Teachers will enjoy the clever mechanical means provided for keeping the cards in order, and the useful directions for teaching.

The Equipment of the School Theater

By Milton Smith. Cloth, 78 pages. Price, \$1.50. Published by the bureau of publications of Teachers College, Columbia University, New York City.

This study of dramatics in high schools affords an analysis of the present status of the work in 234 public high schools. The chapter on present practices and equipment of schools is especially valuable as a cross section of activities, the extent of which are hardly appreciated. The final chapter on the design and equipment of the stage is a well-rounded statement of this important school-planning problem from the standpoint of the practical teacher-play-director. Even if the writer, with the enthusiasm of most specialists, is extreme in his requirements for completeness and amount of equipment, for dressing rooms, lighting, etc., the architect and school executive will find it the most satisfactory statement available at this time.

How the World is-Housed

Frank G. Carpenter. Cloth, 368 pages, illustrated. Price, 96 cents. American Book Company, New York City.

The origin and manufacture of materials with which the world is housed, would be the correct descriptive title of this book for sixth-grade use. Mr. Carpenter is at his best in describing the geographic and industrial aspects of human housing.

PUBLICATIONS RECEIVED

First-Aid Fire Appliances. Revised regulations of the National Board of Fire Underwriters, New York, N. Y. These regulations will be of especial value to school authorities who are purchasing fire extinguishers and similar apparatus.

Statistics of Universities, Colleges, and Professional Schools, 1927-28. By Frank M. Phillips. Bulletin No. 38, 1929, U. S. Office of Education, Washington, D. C. The report contains statistics of 1,076 universities, colleges, and professional schools for the school year ending in June, 1928. Of this number, 226 are under public control, and 850 are under private control. Included in these two groups are 176 schools of theology, 136 schools of law, 73 schools of medicine, 41 schools of dentistry, 66 schools of pharmacy, 8 schools of osteopathy, and 10 schools of veterinary medicine.

The report shows that the total number of students enrolled in all institutions during 1927-28 was 919,381, of which number 563,244 were men and 356,137 were women. In 1928, the value of grounds belonging to

all institutions listed in the report was \$298,318,209. The value of the buildings alone was \$1,018,047,321.

The American School of the Air. A teachers' manual and classroom guide. Compiled by Alice Keith. Grigsby-Grunow Co., Chicago, Ill. The American School of the Air, which is sponsored by the Grigsby-Grunow Company, with the coöperation of the Columbia Broadcasting System, is intended for the use of educators, whether acting in an administrative capacity, or as teachers in the classrooms. The finest producers, performers, and continuity writers, skilled in the technique of presenting material artistically, have been obtained. The present pamphlet has been prepared to offer definite help in the work, not only covering reception, but also the type of material presented and the manner of presentation. It takes up such phases of the work as classroom reception, classroom aims and procedure, preparation of a schedule of programs, and suggestive topics for presentation.

What Educational Psychology Can Contribute Toward Efficiency in Teaching. By Rev. Leo F. Miller, Columbus, Ohio. National Catholic Educational Association, Washington, D. C. The aim of the school is to collaborate with the church and the home in equipping the child with such instruments of knowledge and virtue that he will be enabled to make his present life an effective preparation for the future world. The necessity of educational psychology in this important work arises from the fact that it alone gives a scientific basis to the various procedures the teacher employs in her work. The present report brings out the fact that the principal contributions of educational psychology toward efficiency in teaching, are accurate methods for sorting the pupil material by mental measurements, and suggestions for the general teaching procedure; the analysis of the learning processes and the formulation of practical directions for making each part of it effective; the technique for teaching the various school subjects and of estimating its merits; and the principles of character formation.

Questionnaires in Educational Research. Bulletin No. 1, Jan., 1930. Research division of the National Education Association, Washington, D. C. This bulletin is intended as a constructive influence in the regulation of the questionnaire problem. It should be of interest to superintendents, graduate students, and similar interested educators. The pamphlet takes up such important items as married women teachers, sick-leave for teachers, data on senders of questionnaires, fields of education, distribution, uses of studies, rating plans, and sources of information.

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NEW YORK CINCINNATI CHICAGO BOSTON ATLANTA

Metal Partitions for Toilets and Showers. Simplified Practice Recommendations R101, 1929. Issued by the U. S. Department of Commerce, Washington, D. C. The pamphlet contains the standard recommendations for sizes and dimensions of metal partitions for toilets and showers.

Library Buildings: Their Planning and Equipment. By Philip J. Turner. Price, \$1. Publication Series XIII, No. 24, 1929, McGill University, Canada. The pamphlet takes up general principles and fundamentals, functions of a library, design, interior arrangement, windows and wall shelving, aspect, and administration. It describes and illustrates a number of library buildings in Canada and the United States.

Consolidation of Schools and Transportation of Pupils, 1927-28. Prepared by Timon Covert. Circular No. 3, January, 1930, U. S. Office of Education, Washington, D. C. This is a circular containing information relative to the consolidation of schools and the transportation of pupils for the school year 1927-28 in each of the 48 states. The circular contains a table, showing the states, the number of school buildings, the number of one-room schools, the size of the teaching force, the per cent of teachers in one-room schools, and the extent of pupil transportation in the various states. The report shows that the total number of consolidated schools in 43 states is 17,004. A total of 1,250,574 pupils were transported at public expense in 1927-28 in 36 states. Thirty-two states reported a total of 42,768 motor vehicles and a total of 5,691 horse-drawn vehicles. The total cost for pupil transportation in 45 states is \$39,952,502.

Studies in Character. By Robert D. Sinclair. University Studies, University of Iowa, Iowa City, Iowa. *A Comparative Study of Those Who Accept, as Against Those Who Reject, Religious Authority.* A set of group tests based on muscular, intellectual, and volitional characteristics. In all branches, the radicals seem to have a slight advantage. The results are unconvincing.

Studies in Character. By Robert D. Sinclair. University Studies, University of Iowa, Iowa City, Iowa. *A Comparative Study of Those Who Report the Experience of the Divine Influence and Those Who Do Not.* Standard tests have been used to gauge the character of those who have experienced the divine influence, and those who haven't. No conclusive results were obtained, the honors being quite evenly divided.

Pensions and Public Education. A reasonable and sound system of retired pay is essential to the improve-

ment and effectiveness of public education, according to Dr. Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching, in Bulletin No. 25 of the Foundation, entitled "The Social Philosophy of Pensions." Dr. Pritchett reviews the teachers' pension systems now in operation, and the progress in the field since 1903, and sets forth the merits and shortcoming of a number of such systems. Reasons are given for considering the systems of Vermont and Wisconsin among the best. Other systems were criticized as having some serious limitations.

Experimental Research in Education. By Walter S. Monroe and Max D. Engelhart. Bulletin No. 48, 1930, University of Illinois, Urbana. Experimental research, as a means of evaluating educational procedures, occupies an increasing position of importance. The idea of "controlled experimentation" is easy to comprehend, but it is not easy to specify precisely what is involved in maintaining a control group. This bulletin seeks to describe in some detail, the procedure of controlled experimentation, and on the basis of the requirements, a small group of experiments is evaluated. The analysis of factors affecting pupil achievement and the evaluation of the factors considered are largely subjective. The study which has involved experiments relating to supervised study, has revealed the meager contributions that the various studies have produced. The problems seem to be that of determining the relative effectiveness of supervised study, in comparison with other promising plans. The experiments, it is believed, have not been planned so as to compare the two plans of instruction designed to encourage study habits, so that they have failed to add to the knowledge on how to instruct pupils in methods of study.

In Reproof

To the Editor:

Anyone reading the review of "Blaisdell's Instructional Tests in Biology," written by "E. J. M." in the January issue, would be led to believe that the entire book is filled with the "true and false" type of question. If the reviewer had examined the book critically he would have found that less than one ninth of the 1,250 items in the book are of this so-called "erroneous" type of question.

The review is devoted to a severe criticism of one ninth of the book. Something should be said about the other eight ninths of the work. The reviewer quotes one false statement from Test No. 8, without explaining to his readers that the student writing the answers to this part of the test must not only declare the state-

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ment to be "not true," but he must add the word or phrase necessary to make the statement *true*. By this method the student is left with the true statement in his mind.

As a teaching device the true-false type of question is unsatisfactory, if the class does not indulge in a discussion of each question together with the answer. However, the criticism of the true-false question is given in the review as a poor testing device. The criticism is not valid. When a pupil is faced with a number of true-false statements, he is told at the start that some of them are true, and some are not true. He is aware in the case of every item that he marks as true or not that he may be wrong.

On the other hand, if a pupil is given a set of questions to answer, and he writes out his answer, he is not on his guard against incorrect statements that he himself makes, and much of what the pupil writes on examinations is not correct. So that, from the standpoint of the impression on the pupil's mind, the true-false question is likely to do much less harm than the statements which the pupil himself makes up as he writes his answer.

Furthermore, the very fact of the pupil composing his own answer would have the effect of impressing it more on his mind as being correct, even though it is wrong, than would a printed statement which he reads, especially if he knows beforehand that it may not be true.

It might be added further, that a good teacher usually goes over a set of test questions with a class. In the case of the objective type of question, such as the true-false, each question has a definite answer. Therefore, as each question is taken up the correct answer can definitely be given. In the case of the essay type of question, the teacher, or some pupil in the class, gives a more or less general statement which may not bear at all on what some of the pupils have written. Therefore errors made by pupils in their answers to the essay type of question may not be touched upon in a class discussion.

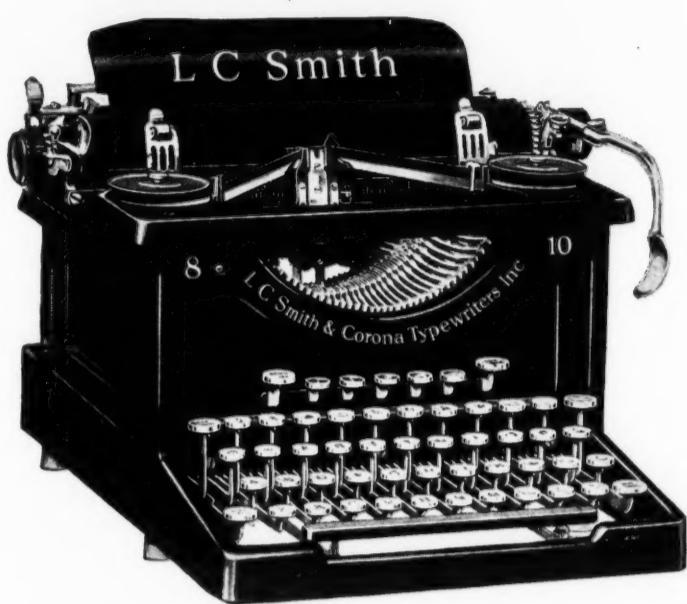
The true-false type of question has been criticised as a poor pedagogical device. It may be that—if used unwisely; it can be used to good advantage by the average teacher.

Hazel Lee

Yonkers, N. Y., April 11, 1930.

World-Picture Building

J. Russell Smith. Cloth, 112 pages, illustrated. Price, \$2.50. Paul Garrigue, New York City.
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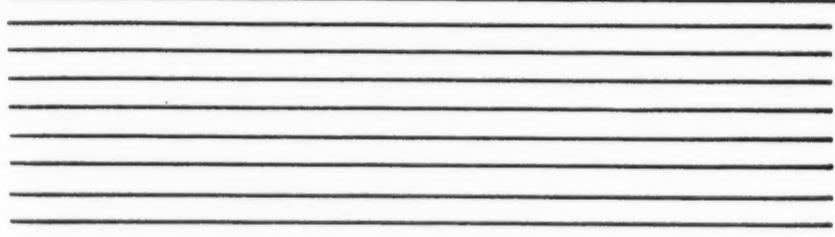
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THE VALUE OF MILK DIET

The Hamtramck Public School Bulletin for March, 1930, includes the results of a milk project conducted by the Holbrook School, Hamtramck, Mich.

During the month of December, 230 children in the Holbrook School were chosen for a Milk Project, which is to continue until the close of the school year in June. One hundred and fifteen of the kiddies are given one pint of milk daily, and are paired according to comparative height and weight with children not receiving the extra milk. The results of the project to date are as follows:

Dec. 13, 1929		Jan. 22, 1930			
Per Cent Underweight	Per Cent Control	Per Cent Underweight	Per Cent Control	Per Cent Gained	
6th	8.2	6.1	6th	5.2	4.3
5th	7.0	6.8	5th	6.0	4.6
4th	6.6	5.4	4th	5.6	4.6
3rd	6.8	3.3	3rd	4.8	3.9
2nd	4.2	5.7	2nd	3.0	5.3
1st	7.0	4.4	1st	5.8	3.8
Total	38.8	31.7	Total	30.4	26.5
				9.4	6.5

Conclusion

Dividing the totals as they appear above by 6 (the number of grades) we find that on December 13, 1929, the children chosen to receive extra milk averaged 6.4 per cent underweight per child. The control child averaged 5.3 per cent underweight. On January 22, 1930, the child given extra milk was 5.08 per cent underweight, an increase of 6.53 per cent. The control child was 4.4 per cent underweight — showing an increase of 6.08 per cent. We conclude the child receiving extra milk increased in weight .48 per cent over the control during these first 39 days of the experiment, and the good work continues.

SUMMER ROUND-UP OF PRESCHOOL CHILDREN

Writing in the official quarterly of the Wisconsin State Board of Health, W. F. Walker, field director of the American Public Health Association, recommends very strongly a summer round-up of children who are to enter the schools in the fall for the first time. He says:

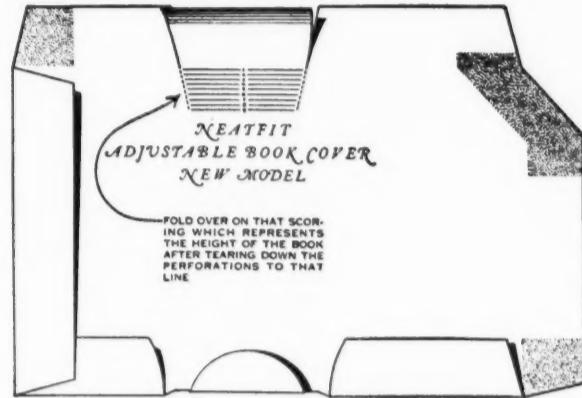
"The ambition and the effort to have all children about to enter school for the first time examined by their family physicians, and all remediable defects corrected prior to the child's starting out upon this most important stage in its early career are both commendable and economical. A new and wider world is opened up to the child the day he enters school, and through this new world of contact, he may be exposed to disease through contact with carriers; besides he has to adjust himself mentally and physically to the new atmosphere into which he has been introduced. For all this and to insure reasonable progress at school, the child should be as free as possible from personal handicaps.

"How carefully we usually find the mother has prepared for the event of school entrance by providing suitable clothing and any other special equipment the child may require, but how little attention is often given to the child's physical preparedness for school! Is the child going to be under a handicap through some defect in eyesight, or in hearing, or respiration, or in some other way? This question has perhaps not occurred to the parents. They have not considered how much of the school time of that child may be lost, or partially lost, because of such handicaps. While life in school can hardly be compared to a race, yet no child should enter it, until divested of all unnecessary impediment and all removable handicaps.

"Many individuals and organizations can be interested in the Summer Round-up of Preschool Children. There are in particular the parents as individuals, the school authorities who have to provide schools, equipment, and the teaching staff, the teachers, the health authorities, the medical society, and other health agencies. These individuals

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may be banded together into organizations like the parent-teacher associations, but whether they are or not, they are all interested though the interest is sometimes latent. Health officers can greatly further their own work and render a definite service to the community by campaigning for and awakening interest in these Summer Round-ups. Such concerted efforts for finding and correcting physical handicaps in children just prior to entering school are organized in several ways. Frequently the school is made the unit of organization using the Parent-Teacher Association, mother's club, or similar group as the motivating force. In one city the physicians in a certain district were organized and the examination done in their private offices, using forms and methods approved by the department of health. The school children may be helpful in acquainting parents with the importance of the examination and where it will be made.

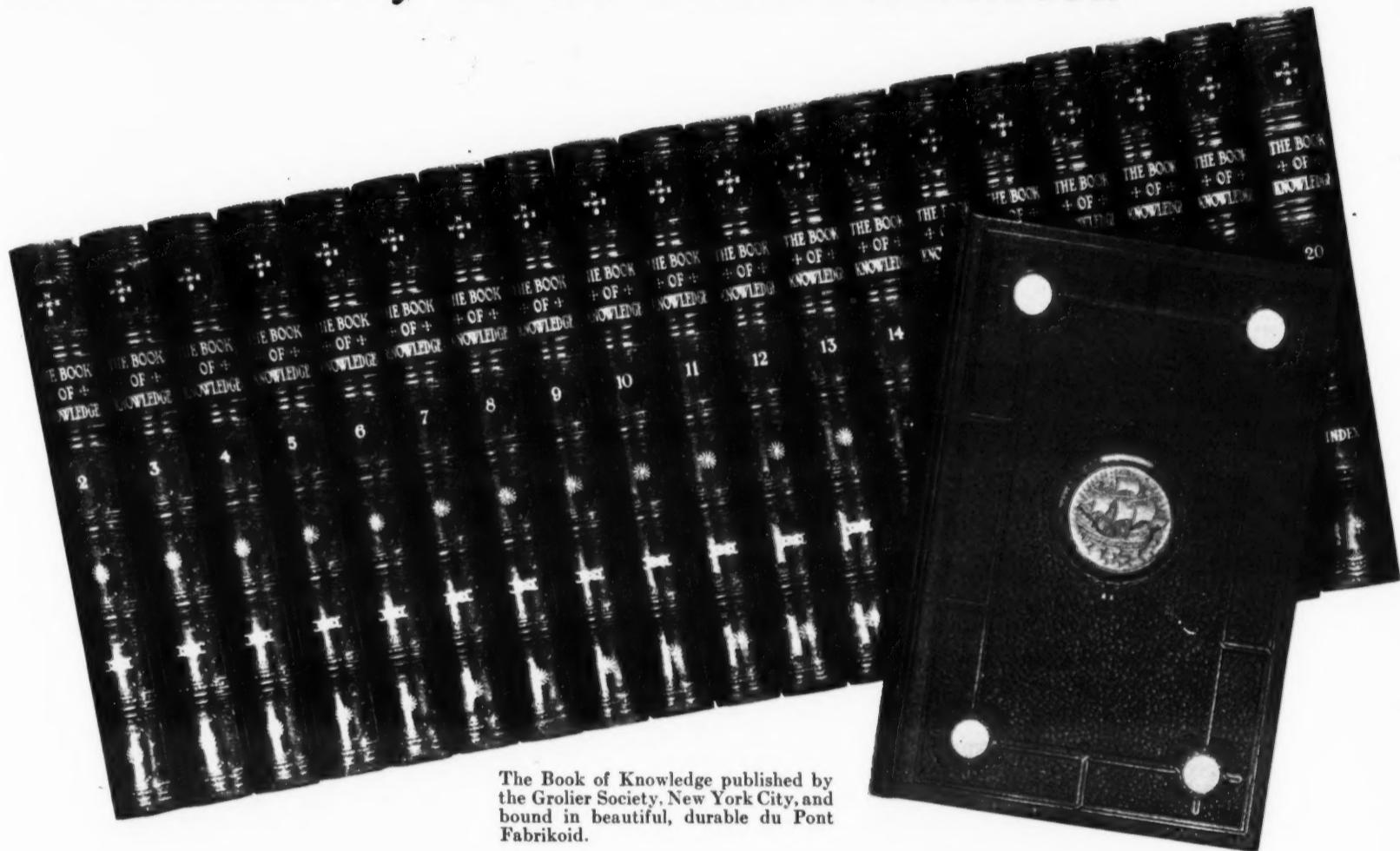
"Whatever the method employed, the efforts to promote health among preschool children should not be confined to the few months before the child enters school, but the event of school entrance does provide a special opportunity either to do something where little or nothing has been attempted, or to add materially to the program where something definite is already being done."

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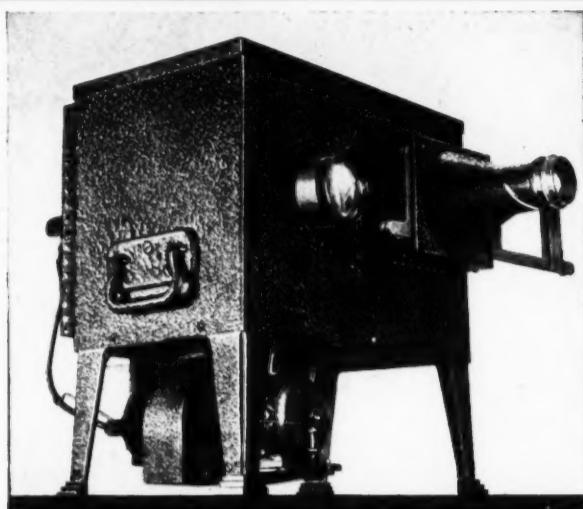
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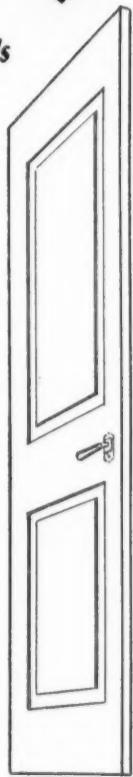
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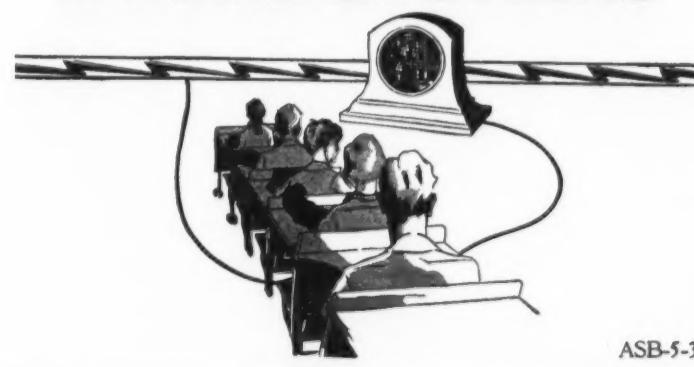
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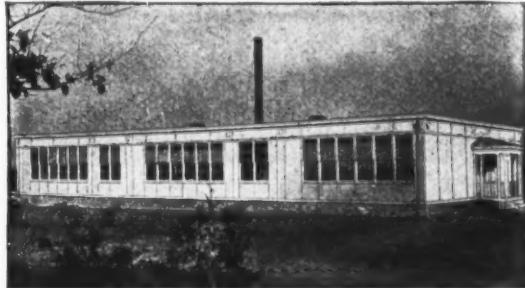
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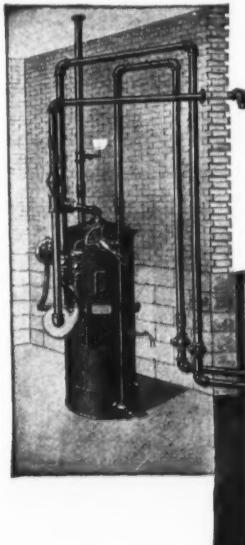
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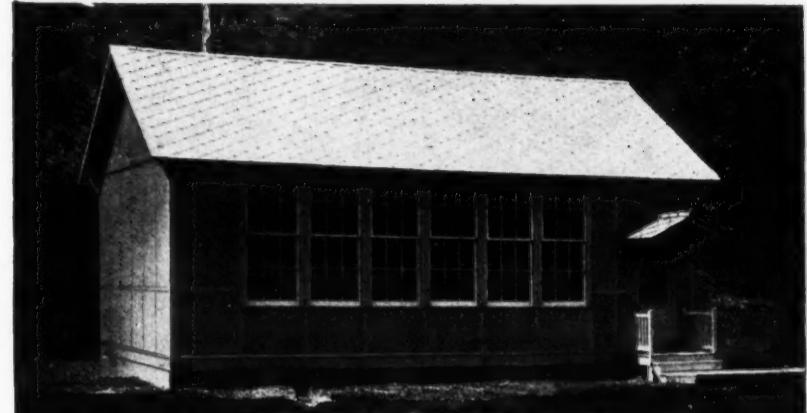


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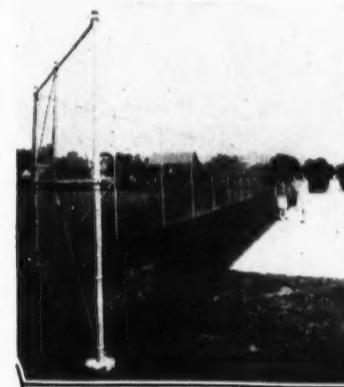
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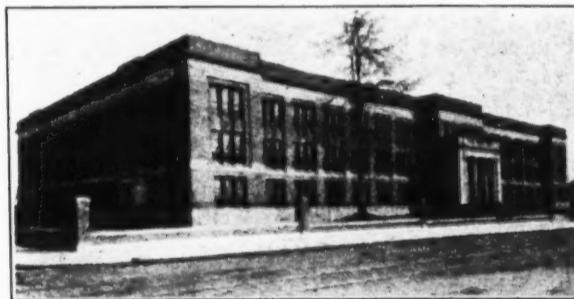
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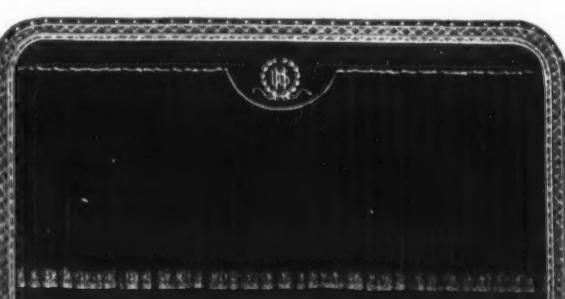
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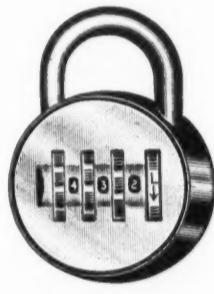


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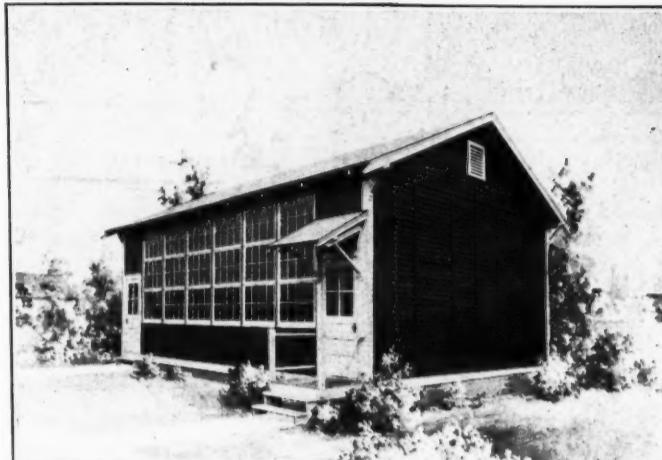
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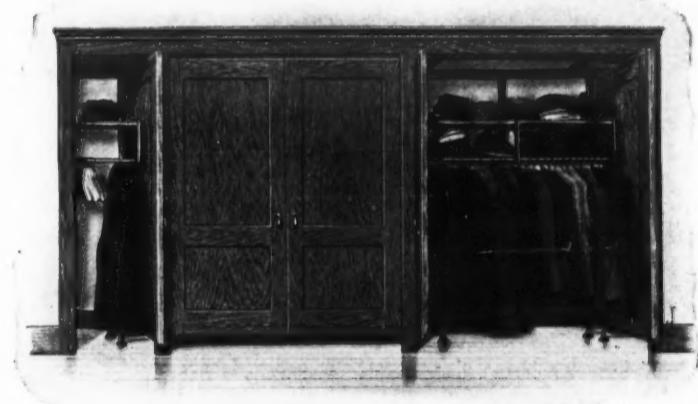
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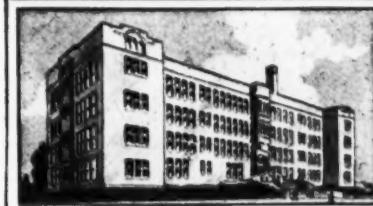


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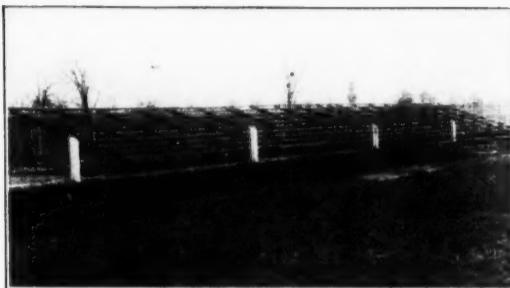
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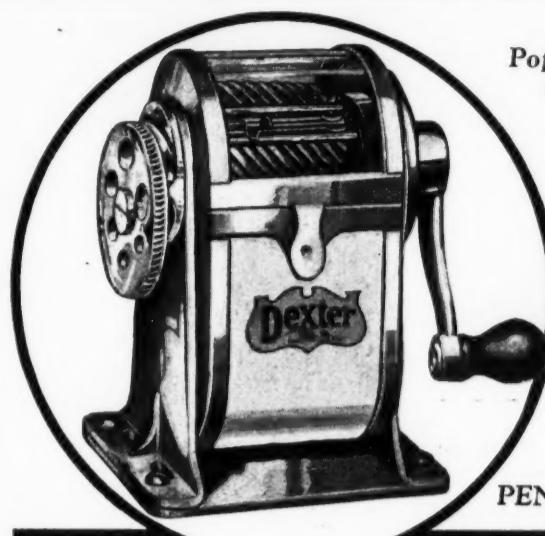
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craftsmanship ☺**

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Reproduction from Vul-Cot Advertisement in System Magazine

Learn which offices in your city are standardized on Vul-Cot waste baskets. Your stationer can tell you. Note the names; the kinds of businesses; the kinds of management those offices have.

Do a little thinking about it.

All the big companies, all the modern offices, small and large, are standardized now on Vul-Cot—(except about 4%).

Their questioning and figuring are all finished now. When another waste basket is needed, instantly they get another Vul-Cot as a matter of course.

How does that happen? Each business thought at first its own conditions were different. Yet each of these users found in the end that his own analysis and reasoning led him straight and sure to the same decision that all these thousands of other users had reached,—and to Vul-Cot.

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It's a real gain, or the big companies would not all be so unanimous.

If you're missing it, why shut your eyes? Why not find out about it? Talk with the purchasing man or office manager of any big company.

Or get ONE Vul-Cot. Put it next to your own desk. In 28 days ask yourself if it isn't time every desk in your office had its own Vul-Cot.

Vul-Cots are a product of National Vulcanized Fibre Company, Wilmington, Del. Every real Vul-Cot is permanently name-marked. Look for it. Colors or wood effects to match furniture. At Stationers.

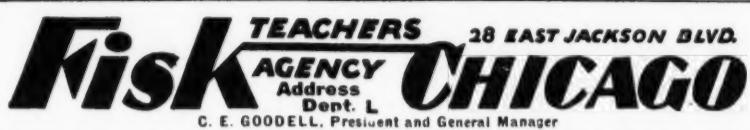
Right waste disposal does affect business and profit; in many ways. Look into it.

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For
Modern
Standards
VUL

COT
Waste
Receivers
"Right"
Every Way

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WILLARD W. ANDREWS
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Twenty years experience. Write for information.
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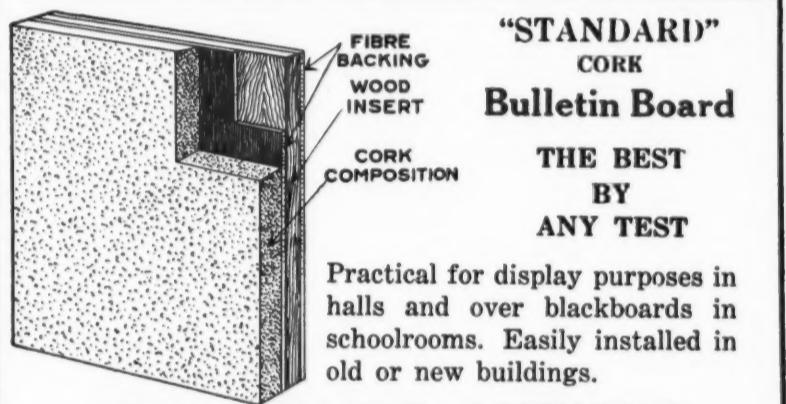
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School Board Journal

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Athey Company, The
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American Blower Company
Buckeye Blower Company
Nelson Corporation, The Herman
Peerless Unit Ventilation Co., Inc.
Sturtevant Co., B. F.
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Sturtevant Company, B. F.
ALUMINUM WARE
Cleveland Range Company, The
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Samson Electric Co.
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(See Schoolhouse Architects' Directory)
ASH HOISTS
Gillis & Geoghegan
AUDITORIUM SEATING
American Seating Company
Heywood-Wakefield Co.
Kundtz Company, The Theodor
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National School Equipment Co.
Peabody Seating Co.
Rowles Co., E. W. A.
Standard Mfg. Company
Steel Furniture Company
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North Electric Mfg. Company, The
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Eagle Soap Corporation
Midland Chemical Laboratories
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Rowles Co., E. W. A.
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Valleyco Company, The
Weber Costello Company
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Rowles Co., E. W. A.
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Minter Homes Corporation
Universal Equipment Co.
Wayne Iron Works
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Hegle Simplex Boiler Company
Kewanee Boiler Company
Titusville Iron Works Co.
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Eagle Soap Corporation
Midland Chemical Laboratories
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Remington-Band Business Service, Inc.
BOOK COVERS
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Iroquois Publishing Company
BOOKKEEPING MACHINES
Remington-Band Business Service, Inc.
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Beckley-Cardy Company
Bruce Publishing Co.
Gregg Publishing Company
Houghton, Mifflin Co.
Iroquois Publishing Company
Laddow Brothers
Lippincott Company, J. B.
Merriam Co., G. & C.
Union Library Association, The
Winston Co., The John C.
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Durabilt Steel Locker Co.
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Russell & Sons Co., Albert
BRONZE TABLETS, SIGNS, LETTERS
Russell & Sons Co., Albert
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Midland Chemical Laboratories
Milwaukee Dustless Brush Co.
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Common Brick Mfrs. Ass'n, The
Detroit Steel Products Company
Johns-Manville Corp.
North Western Steel Products Company
Sonneborn Sons, L.
Structural Slate Company
Truscon Steel Company
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N. Y. Silicate Book Slate Co.
Paddock Cork Co.
Rowles Co., E. W. A.
Weber Costello Company
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Durabilt Steel Locker Co.
CABINETS (WARDROBE) (STEEL)
Durabilt Steel Locker Co.
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Angle Steel Stool Company
Cleveland Range Company, The
Dougherty & Sons, Inc., W. F.
Pick-Barth Co., Inc., Albert
Sani Products Co., The
Van Range Co., John
CANVAS GOODS
Tucker Duck & Rubber Co.
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Clarke Manufacturing Co.
Great Northern Chair Co., The
Maple City Stamping Company
Peabody Seating Co.
Stakmore Company
Standard School Equipment Co.
Tucker Duck & Rubber Co.
Wark-Beacon Steel Furniture Co.

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Clarke Mfg. Company
Mahoney Chair Company
Maple City Stamping Company
Peabody Seating Co.
Rowles Co., E. W. A.
Royal Metal Mfg. Co.
Rastetter & Sons Co., Louis
Standard Mfg. Company
Tucker Duck & Rubber Co.
Vitek Mfg. Co.

CHALKS
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Beckley-Cardy Company
Binney & Smith Co.
CHARTS

Nystrom & Co., A. J.
Weber Costello Co.

CHARTS
Weber Costello Company
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Eastman Teaching Films, Inc.

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Continental Chemical Corporation

Hilliard Chemical Company
Midland Chemical Laboratories

Oakite Products, Inc.

CLEANING PRODUCTS
Eagle Soap Corporation

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Standard Electric Time Co.

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N. Y. Silicate Book Slate Co.
Weber Costello Company

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Dudley Lock Corporation, The
Greene Tweed Corp.
Miller Keyless Lock Co., J. B.

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Concrete Marble Company

CORK TILE AND CORK CARPET
Congoleum-Nairn, Inc.

COOKING APPARATUS
Cleveland Range Company, The

Dougherty & Sons, Inc., W. F.

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Beckley-Cardy Company
Binney & Smith Co.

National Crayon Co.

Rowles Co., E. W. A.

Weber Costello Company

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N. Y. Silicate Book Slate Co.

Weber Costello Company

CRAYON TROUGHS
Dudfield Manufacturing Company

Weber Costello Company

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Sonneborn Sons, L.

Truscon Steel Company

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Celotex Company, The

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Beckley-Cardy Company
Imperial Desk Company

Rowles Co., E. W. A.

DIPLOMAS
Beckley-Cardy Company

DISHWASHERS
Cleveland Range Company, The

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Midland Chemical Laboratories

Oakite Products, Inc.

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Hilliard Chemical Company

Midland Chemical Laboratories

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Kewanee Mfg. Co.

Kimball Company, W. W.

Peterson & Co., Leonard

Pick-Barth Co., Inc., Albert

Sheldon & Co., E. H.

Van Range Co., John

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Irving Hamlin

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Roddit Lumber & Veneer Co.

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Angle Steel Stool Company

Bradley Company, Milton

Christiansen, C.

Kewanee Mfg. Company

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Shepard & Co., E. H.

Vitek Manufacturing Co., Inc.

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Rundle-Spence Mfg. Company

Taylor Company, Halsey W.

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Rowles Co., E. W. A.

Weber Costello Co.

ERASER CLEANERS
Weber Costello Company

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Clyde Equipment Corp.

Cyclone Fence Co.

Page Fence Association

Stewart Iron Works Co., The

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Standard Electric Time Company

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Potter Manufacturing Corp.

FIRE EXIT LATCHES
Potter Manufacturing Corp.

Steffens-Amberg Company

Vonnegut Hardware Co.

FIREPROOF DOORS
Detroit Steel Products Co.

Truscon Steel Company

FIRE INSURANCE
Federation of Mutual Fire Insurance Companies

Home Insurance Company, The

FIREPROOFING MATERIALS
Asbestos Buildings Company

FLAGS
Annin & Co.

FLAG POLES
Bielefeld & Company, Otto

Rowles Co., E. W. A.

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Heywood-Wakefield Co.

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Hill Floor Machine Co.

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Continental Chemical Corporation

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Sloan Valve Company

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Mahoney Chair Company

Maple City Stamping Company

Peabody Seating Co.

Rastetter & Sons Co., Louis

Royal Metal Mfg. Co.

Stakmore Company

Standard Mfg. Company

Tucker Duck & Rubber Co.

Vitek Manufacturing Co.

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Richards-Wilcox Mfg. Co.

Horn Folding Partition Co.

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Wilson Corp., Jas. G.

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American Seating Co.

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Beckley-Cardy Company

Cleveland Range Company, The

Columbus School Supply Company

Great Northern Chair Co., The

Heywood-Wakefield Co., The

Imperial Desk Company

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Kimball Company, W. W.

Kundtz Company, The Theo.

Maple City Stamping Company

National School Equipment Co.

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School Board Journal

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(Continued from Page 180)

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Stewart Iron Works Co., The
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Bowles Mfg. Company, The
Bradley Wash Fountain Co.
Clow & Sons, James B.
Copper & Brass Research Association
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National Theatre Supply Co.
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Holmes Projector Company
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Westinghouse Electric & Mfg. Co.
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REINFORCED STEEL
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Truscon Steel Company
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American Abrasive Metals Co.
SANDERS
Clarke Sanding Machine Company
Hild Floor Machine Co.
National Sanding Machine Co., The
SASH OPERATING DEVICES, STEEL
Detroit Steel Products Company
Truscon Steel Company
SASH, VENTILATING
Detroit Steel Products Company
SCIENTIFIC APPARATUS
Rowles Co., E. W. A.
Standard Electric Time Company
SCREENS—PICTURE
Eastman Teaching Films, Inc.
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Screen Corp.
SEWAGE EJECTORS
Nash Engineering Co.
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Eveloth Mfg. Co.
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Belson Mfg. Co.
Jackson Corp., A. P.
National Theatre Supply Co.
Novelty Scenic Studios
Standard Decorating Co.
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Weiss & Sons, I.
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Norton Company
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Durabilt Steel Locker Co.
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STORAGE CABINETS (STEEL)
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STEEL LOCKERS
All-Steel-Equip Co.
Berger Manufacturing Co.
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Durabilt Steel Locker Co.
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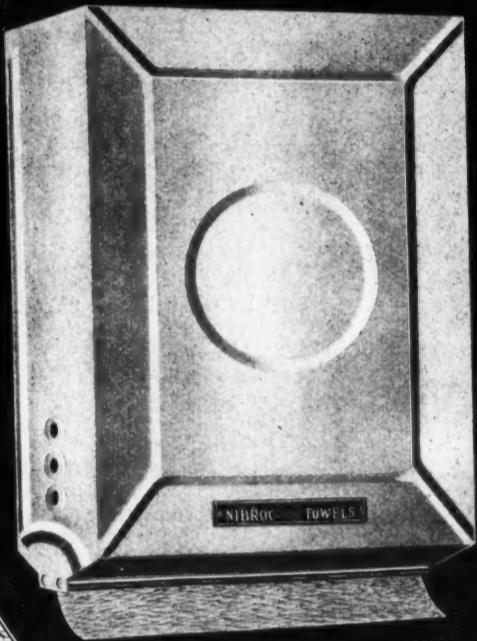
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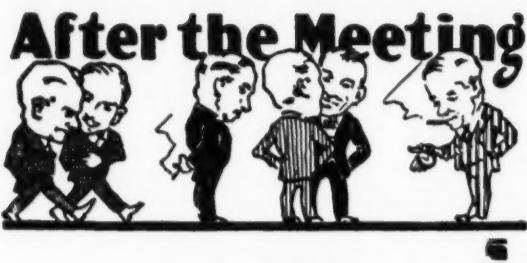
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and
Economize
with

NIBROC TOWELS

ONLY with the strict observance of sanitary conditions in your school washrooms and classrooms can good student health be maintained. The installation of NIBROC Towels in your schools will protect the health standards of your community. Unlike a cloth towel that is used repeatedly, NIBROCS are served fresh and clean, *used once* and quickly disposed of. NIBROCS excel in strength, purity, and absorption. They are emollient and free from lint. Economical too—a single 10" x 15" sheet will dry the wettest pair of hands *thoroughly*. No need of doubling NIBROCS to prevent disintegration. You have a choice of *golden brown* or *pure white* NIBROCS, of equal quality. Send for generous free supply of NIBROCS today, at our expense. Compare and test them with other makes. NIBROCS will convince you on merit alone.

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Company
FOUNDED 1852
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Portland, Maine

AD GREETINGS



For the Bell Ringer

The scholar Muretus, who died in 1584, was one of those who have given the university professor a reputation for caustic wit.

One day a student brought into Muretus' lecture room a small sheep bell, which he concealed under his coat, and rang at unexpected intervals. For a time Muretus seemed not to notice the prank, then he said dryly: "Every big herd of sheep must have a bellwether. I see ours is making itself heard."

And the ringing was not heard again.

No Better

State Superintendent John Callahan of Wisconsin occasionally uses an old story to drive home a point. In cautioning teachers in a large new high school against the mistake of expecting efficiency because of the size of a school, and the beauty and completeness of the plant, he told this story: Sallie, the colored cook, came to her mistress one day with a magazine containing a rather fine picture of Queen Elizabeth.

"Who dat lady?" she inquired.

"Why, that's Queen Elizabeth, Sallie." Sallie seemed nonplussed. Then she said dryly:

"Sho, she am a homely woman. My lan, Miss Jones, she ain't no better looking than you is."

And He Was

The old professor was incensed when the young freshman dared question a point in his lecture. "Young man," he said severely, "when I was your age I considered myself too childish to dispute my elders."

"I'll say you're well preserved, sir," answered the freshman.

SCHOOL HOWLERS

Collected by H. Ainsworth

A vacuum is an empty space where the Pope lives.

A vacuum is a dust remover.

To germinate is to become a naturalized German.

The process of turning steam into water again is called conversation.

A circle is a round line with no kinks in it, joined up so as not to show where it began.

To remove air from a flask, fill the flask with water, tip the water out and put the cork in quick.

The "law of gravitation" demands that the grass in every town churchyard shall be cut once every year.

Gravitation is a limit of ten miles per hour.

Gravity tells us why an apple does not go to heaven.

Parallel lines are lines which if produced to eternity will then meet.

Chlorine gas is very injurious to the human body, and the following experiments should, therefore, only be performed on the teacher (by?).

Ice—Water that went to sleep in the cold.

Polygon—a man with several wives.

A surface is the very top you cannot see.

Diameters of tubers are measured by a pair of caterpillars (calipers?).

When a graph of Y equals X^2 is plotted, what is the resultant curve? — An eclipse.

The weight of one square centimeter is put upon it.

How would you make soft water hard? — Freeze it.

A period is a dot at the end of a sentence. Period costumes are dresses all covered with dots.

Explain the word "buttress"—A Woman who makes butter, a female butcher.

Examinations may be written or "vice versa."

Masculine — man, feminine — woman, neuter — corpse.

An iambic pentameter is a five-sided figure with equal sides.

A phlegmatic person is one who has chronic bronchitis.

The plural of ox is oxygen.

Why Teachers Need a Three Months' Vacation
(Letter received by a teacher)

"Dear Miss _____:

My Homer says you don't like him and that you ask him all the hard questions. That ain't right. You should tell Homer about geogaffy, history and spellin, not ask him hard questions, because you don't like him. Homer is like his paw, terrible onery. If you want him to mind, make out you like him and don't ask such hard questions. He is only a boy.

Mrs. J. G. _____"

Dad's Vacation

It was the first day of school and the teacher was asking the names of the children, those of their fathers, and the business of each one. Small Lucy gave her name and that of her father, but hesitated and became silent when it came to his business. Urged by the teacher she blushingly said:

"He is Aunt Jane that does the woman's page and the Beauty Column in the Daily News."

Very Likely True

Teacher: "Tell me what causes the heat in this room?"

Student: "The stupidity in the atmosphere."

Who Then

Prof: "Do you think this class is a joke, young man?"

Stud: "No, Sir. I'm not laughing at the class."

Unavailing

Teacher: "Johnny, if there are fifteen hooks in a closet and your father puts up five more, how many will he have?"

Johnny: "One."

Teacher: "Johnny, you know that isn't right."

Johnny: "That's what Pop tells Ma, but it don't do him any good."

A Constant Drain

"How many years did your son spend in college?"

"Every one." — Wisconsin Octopus.

TO A GRADUATE

They call this commencement

Fifly so,

'Tis the beginning, not the end,
Now you must grow.

"A little learning is a dangerous thing."
So spoke the sage.

To men and women, God's choicest gift
Is age.

Age lifts the mists from years,
Shows our true worth;
Never fear, time assigns us all
Our place on earth.

Walk humbly but look upward,
"See thou character."

True now as then,
Be not afraid, the crying need is men.

—Clarence P. Milligan,
in Chicago Tribune.

Practice Made Perfect

A little girl, when asked by her teacher to distinguish between the human and the animal families, replied:

"A brute is an imperfect beast: man is a perfect beast."

Right, Again

The teacher had been reading to the class about forests.

"And now, boys," she asked, "which one of you can tell me the pine that has the longest and sharpest needles?"

Up went a hand in the front row.

"Well, Tommy?"

"The porcupine!" — Country Gentleman.



AMERICAN SCHOOL BOARD JOURNAL

NO PLACE FOR THE WISE MAN TO HESITATE



Keeping Ahead of Fires

Every property owner has an interest in every fire, because it affects the rates he has to pay for fire insurance.

Mutual Fire Insurance companies have long recognized the fact that the direct, effective way to reduce fire insurance cost is to reduce fire losses. Also that the way to reduce fire loss is to keep ahead of fires—prevent them.

Mutual inspection and engineering service have cut fire losses, and a tremendous saving has been passed on to mutual fire policyholders.

Policyholders are the actual owners of a mutual fire insurance corporation. There are no stockholders. Conservation and saving in the interest of policyholders, is the sole concern of mutual management—the authentic measure of its ability.

Every property owner will find interest in a booklet which outlines the principles and operation of mutual fire insurance. Send for it today. Address Mutual Fire Insurance, Room 2202-C, 180 North Michigan Avenue, Chicago, Illinois.

An Unparalleled Record

75 leading, legal reserve companies under State supervision constitute the Federation of Mutual Fire Insurance Companies. The oldest Federation company was founded in 1752. Five others are more than 100 years old.

Of the remaining companies—

9 are between 75 and 100 years old
10 are between 50 and 75 years old
30 are between 25 and 50 years old
20 are between 10 and 25 years old

The Federation companies are protecting property to the extent of six billion dollars—have assets in excess of ninety million dollars—have returned to policyholders savings of more than one hundred and thirty millions of dollars.

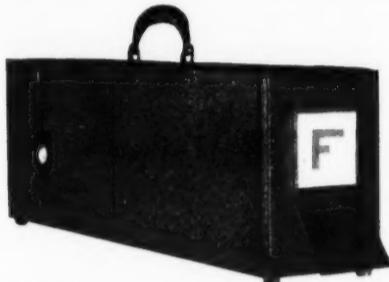
Mutual Fire Insurance
FEDERATION OF MUTUAL FIRE
INSURANCE COMPANIES

BUYERS NEWS

In this column will be found from month to month brief mentions of new products which are of especial interest and value to school authorities and which have a distinctly school application. Announcements of new catalogs and other literature of value to school authorities and notes of important business changes are published. The BUYERS' NEWS column is conducted as an important service to school authorities.

NEW PRODUCTS

Harrington Group Vision Tester. A new scientific method of group testing the vision of children has been perfected by Dr. F. E. Harrington of Minneapolis. The device is now marketed for school use by



HARRINGTON GROUP VISION TESTER

the Spencer Lens Company, of Buffalo, N. Y. Fifteen children may be tested at one time, and special means are provided for testing small children who cannot read, children who are just learning to read, and children who are advanced in the higher grades. Complete literature on this timesaving instrument is available.

New Kewanee Type R Steel Boiler. The Kewanee Boiler Corporation, of Kewanee, Ill., has just issued an interesting booklet, describing and illustrating its Type R steel boiler. This boiler has many striking advantages over previous designs. It is fabricated from steel, with electric-weld seams and a cast-iron base, and complies with all the requirements for economy and dependability in steam generation and water heating. It is especially adapted for the small school and will burn every kind of fuel, including liquid fuel oils, and natural or commercial gas. The Kewanee Company offers to furnish working drawings and specifications for installing the Type R boiler to architects and school authorities.

Announce New Asbestos Wall Tile. The Johns-Manville Corporation, of 292 Madison Ave., New York City, has announced the marketing of a new asbestos wall tile. The product, which has been produced after more than two years of research, is formed of asbestos fibers and Portland cement, united under great pressure into large sheets, and is grooved to give the effect of individual units. The tile is durable, waterproof, and fireproof, and comes in a wide range of attractive color combinations produced with lacquer materials.

A feature of the tile is its economy and ease of application. It may be cut with a saw and erected without cement. Brass strips lacquered to match the tile, lock into the brass clips, effectively concealing the joints.

New Floor Surfacing Machine. The American Floor Surfacing Machine Co., of Toledo, Ohio, manufacturers of floor surfacing and polishing machines for the past 25 years, has just announced a new portable belt sander under the name of American Sanderplane.

The American Sanderplane should serve a useful purpose in school maintenance departments, since it offers a practical medium for the refinishing of desks, chairs, and table tops. It answers the purpose for a light-weight, portable sander in the manual-training department. The new sander is useful for refinishing surfaces which are new, spotted, marred, scratched, or stained. It produces a smooth finish easily and quickly, with the least amount of effort and operating cost.

Announce Bell-Howell Sound Movie. The Bell & Howell Company, of Chicago, has announced the marketing of its new Project-O-Phone, or portable sound movie, consisting of three small units, which can be easily carried from place to place. A standard 16-in. phonograph record of the 33 1/3 r.p.m. type is used, with perfect synchronization for projected pictures. The film is standard 16 m.m. The projector, player unit, and speaker are contained in a separate case, and can be quickly set up and easily operated. The unit may be operated on a 60-cycle alternating current, but a small portable converter is furnished in school districts where only direct current is available.

New Scrubbing Equipment. The Finnell System, Inc., of Elkhart, Ind., has announced the marketing of a new electric vacuum mopper for the cleaning of school floors. The mopping machine which follows the scrubber, removes all dirty emulsion from the floor, rinses the floor with clean water, and then removes it from the surface. The machine constitutes a labor-saving device, as it makes floor cleaning a profit instead of an expense.

The Finnell Company has perfected an improved line of Finnell floor-scrubbing and polishing equipment, which comprises several machines entirely different from any of those previously marketed. Among these are a machine with a 15-in. diameter brush ring, an 18-in. diameter machine, with extra weight and standard equipment, and a double-disk machine, with a brush spread of 21 in.

New Trans-Lux "Little Wonder" Picture Projector. The Trans-Lux Daylight Picture Screen Corporation, 247 Park Ave., New York City, has announced its latest product, the Trans-Lux "Little Wonder" picture projector, which is built along the lines of the DeLuxe Model A air-cooled opaque projector. The projector is a portable combination air-cooled-opaque and stereopticon unit. It does not burn the material or the hands while inserting material, is easily carried, light in weight, and needs no adjusting of the lamps. The projector may be obtained at the low price of \$160.

Announce New DeVry Industrial Cine-Tone for School Use. The DeVry Corporation, of Chicago, Ill., has just announced a new 16 mm. Cine-tone talking-machine equipment, which is a portable film projector, with sound equipment, for school use.

The Cine-tone is a combined unit, comprising a 16 mm. projector and a 16 in. 33 1/3 r.p.m. phonograph-record turntable. The equipment insures absolute control of the volume of sound to meet all requirements. The optical system is powerful enough to afford brilliant illumination over an 8 ft. screen.

Complete information and prices may be obtained by any school official, who will address the manufacturers at 333 North Michigan Ave., Chicago, Ill.

New Map-o-Graphs for Desk Outline Maps. The Weber Costello Company, of Chicago Heights, Ill., has placed on the market a new map-o-graph, which is an apparatus for producing desk outline maps. The new apparatus makes possible clear-cut presentations, minimizes the use of blackboards, can be used as reference material, and may be easily corrected. The maps may be rolled into a notebook, and no stencils or tracing apparatus are needed. The new apparatus does not soil the hands. It increases the efficiency and interest in the teaching of geography.

Complete information and prices may be obtained by any school official.

New Smith Sight-Saving Typewriter. The first L. C. Smith typewriter for sight-saving classes was demonstrated at the last meeting of the National Education Association, held on February 28, at Atlantic City. The typewriter which is a Model No. 27, with Bulletin Caslon upper and lower case, is designed for easy reading and for the conservation of vision. The machine is marketed by the School Department, L. C. Smith Company, Syracuse, N. Y.

New Eastman Films. The Eastman Teaching Films, Inc., of Rochester, N. Y., has announced two new films, entitled "Pig Iron to Steel," and "Iron Ore to Pig Iron." The films are part of a large and growing series of classroom films prepared especially for school use, in the teaching of geography and industrial economics.

Vogel Closet on Endurance Test. The Joseph A. Vogel Company, of Wilmington, Del., has since July, 1929, conducted an endurance test of the No. 10 seat-action closet. Each week the test has been interrupted long enough to make an inspection of the parts to detect any signs of wear. To date, the closet has flushed more than 105,000 times, and it has not been necessary to replace even a washer. The test will be continued until some part shows signs of wearing out.

New RCA Portable Photophone Apparatus. The RCA Photophone, Inc., of New York City, has announced the marketing of a new portable photophone apparatus for use in the reproduction of talking motion pictures. The apparatus includes a complete sound projector, ready to plug into the electric-light socket and to be wheeled from room to room as desired. It is useful for the specialized fields of education and is capable of bringing to education entirely new methods of scientific and laboratory demonstration which have previously been offered only in the leading educational institutions.

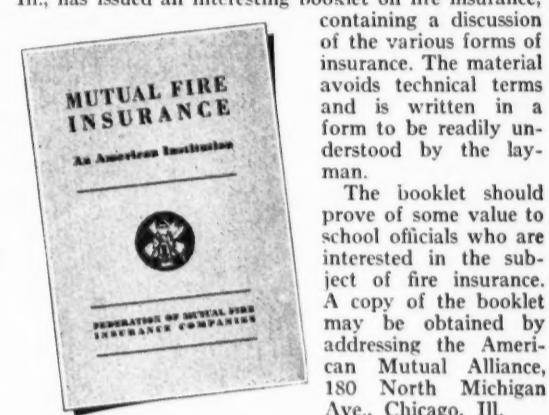
NEW TRADE CATALOGS

Wilson Partition Catalog. The J. G. Wilson Corporation, of New York City, has just issued its new Catalog No. 38, describing and illustrating an extensive line of sectionfold partitions for school use. The

book lists folding partitions for gymnasiums, combined auditorium and gymnasium purposes, practical assembly-hall purposes in small schools, and for all uses where there is need for temporary additional space. The booklet includes working drawings, specifications, and general data and will be sent to any school official or architect.

Planning School Restaurants. A valuable book providing technical information on the economical planning of school lunchrooms has just been issued by the John Van Range Company, of Cincinnati. A wealth of information on planning kitchens, lighting, finishing interiors, and selecting equipment is included in the book, which will be sent to any school official, or architect, upon request.

Suggestive Booklet on Fire Insurance. The Federation of Mutual Fire Insurance Companies, Chicago, Ill., has issued an interesting booklet on fire insurance, containing a discussion of the various forms of insurance. The material avoids technical terms and is written in a form to be readily understood by the layman.



The booklet should prove of some value to school officials who are interested in the subject of fire insurance. A copy of the booklet may be obtained by addressing the American Mutual Alliance, 180 North Michigan Ave., Chicago, Ill.

New Seating Catalog. The New Jersey Seating Company, Trenton, N. J., has issued its new Catalog No. 20, illustrating and describing a variety of stationary and adjustable school seating. The catalog lists various types of adjustable desks and chairs, stationary desks, pedestal tablet-arm chairs, assembly chairs, commercial desks, typewriter desks, posture back chairs, portable assembly room furniture, teachers' desks, students' tables, office chairs, and tablet-arm chairs.

Floor Maintenance for Schools. *Modern Floors and Their Maintenance* is the title of a new pamphlet issued by the Hillyard Chemical Company, St. Joseph, Mo., as a practical reference help for architects and school officials who face the problem of proper maintenance for school floors.

The booklet offers practical information on proper maintenance for floors, and discusses in particular the Hillyard system of maintenance, for ceramic tile floors, marble, terrazzo, linoleum and cork composition floors, rubber tile, tile-tex, and wood floors. The booklet also takes up the sanitation in classroom floors and the use of the Hillyard products, such as Premier wood filler, trackless floor dressing, shine-all, and gymnasium finish. The booklet is especially noteworthy because of the completeness of the material and the beauty of the illustrations.

New Spray Painting Catalog. At this season of the year when school boards are preparing for the summer repainting campaign, the new DeVilbiss catalog of spray-painting apparatus will be especially acceptable. The catalog, which will be sent to anyone who writes the DeVilbiss Company, Toledo, Ohio, represents the DeVilbiss painting outfits, which range from a simple portable type costing less than \$40, to complete two- and three-men heavy-duty outfits costing \$750.

Austral Window Hardware. The Austral Window Company, in its latest catalog, No. 28, offers suggestions and specifications for the installation of Austral windows in both wood and steel construction. The booklet has been prepared for the use of architects and school officials, who are confronted with the problem of providing adequate window ventilation, without sacrificing the health of the pupils, or increasing the initial cost of the building, or the cost of maintenance.

RECENT BUSINESS CHANGES

Mr. Loew Becomes Vice-President of Truscon Company. Mr. Oscar W. Loew, who was recently elected as vice president of the Truscon Steel Company, Youngstown, Ohio, had been director of advertising and sales promotion in the firm for the past six years.

Bradley Announces Representatives. The Bradley Washfountain Company of Milwaukee has announced the following new representatives: Mr. M. R. C. Grant, Montana; Mr. R. J. Shank, Iowa and Nebraska, with offices at Omaha and Des Moines; Mr. R. W. Andrews, Rochester, N. Y.; Mr. F. J. Ludwick, Syracuse, N. Y.; Rocky Mountain Architects' and Builders' Service, Denver, Colo.

VOW ANNOUNCING OUR COMPLETE LINE OF "OLD FAITHFUL" COLOR CIRCLE PRODUCTS



The above is a photo of The "Old Faithful" exhibit at the N. E. A. Association Convention, held at Atlantic City, announcing a "Tuned Palette" for all "Old Faithful" art mediums - "Crayonex", "Crayograph", "Pastello", "Ambrite" Colored Chalk Crayons, "Prang" Tempera, and "Prang" Water Colors made by The American Crayon Company. This display with its welcome message to educators aroused great interest.

THE "OLD FAITHFUL" RELATED PALETTES SIMPLIFIES COLOR WORK AND ASSURES ACCURACY.

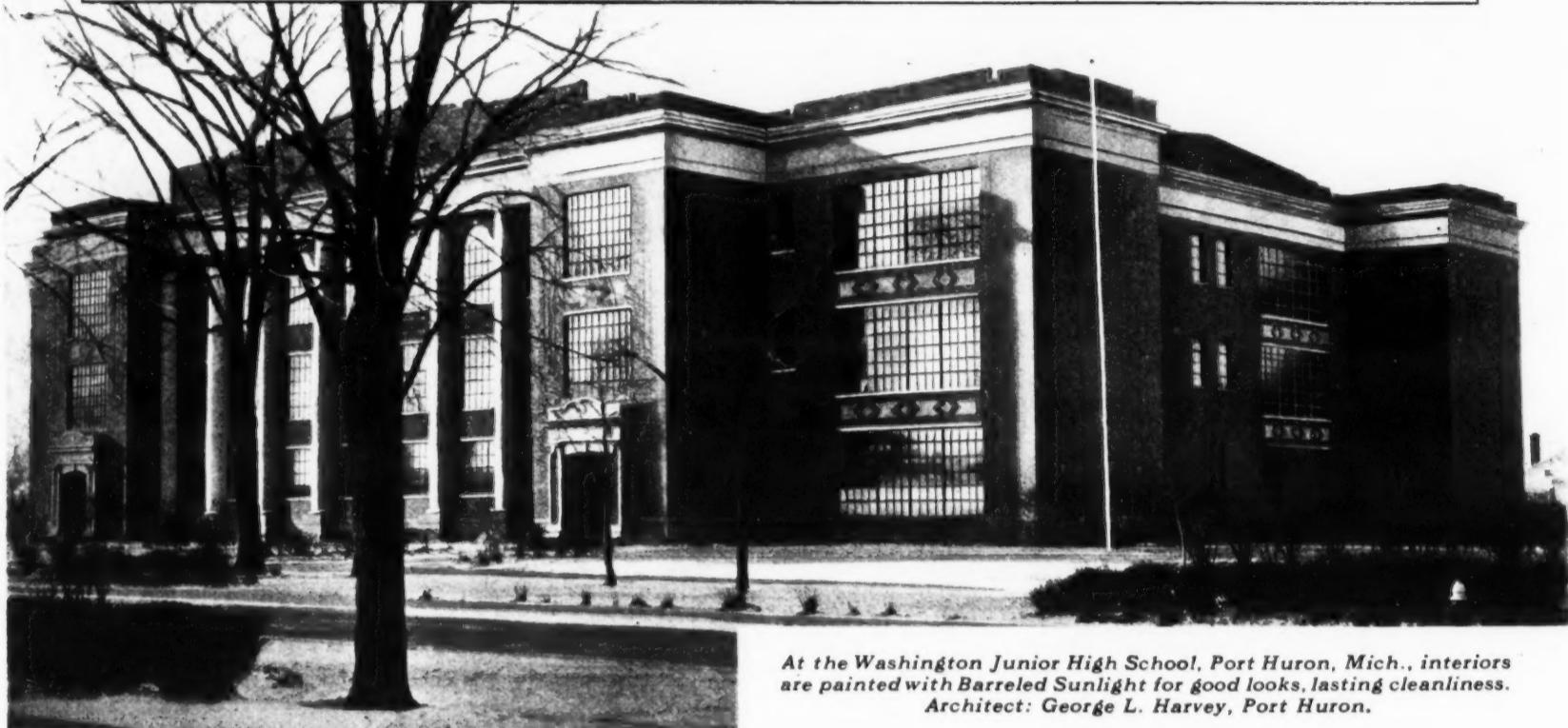
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At the Washington Junior High School, Port Huron, Mich., interiors are painted with Barreled Sunlight for good looks, lasting cleanliness. Architect: George L. Harvey, Port Huron.

Barreled Sunlight helps to keep it well lighted, and insures lasting cleanliness as well . . .

WIDE window frames, narrow steel sash, plenty of panes . . . Classrooms at the Washington Junior High School are flooded with daylight.

Unpleasant glare has been avoided, a soft agreeable working light has been assured, by painting interiors with lustrous satin-smooth Barreled Sunlight.

Not only distinctively good looking, but decidedly practical. Barreled Sunlight's satin-smooth, lustrous surface stubbornly resists yellowing. Stays clean for a surprisingly long time. An occasional washing removes all superficial dust and smudges. When a thorough cleaning becomes desir-

able, Barreled Sunlight washes like tile without wearing away. Initial cost is reasonable; maintenance costs are decidedly low.

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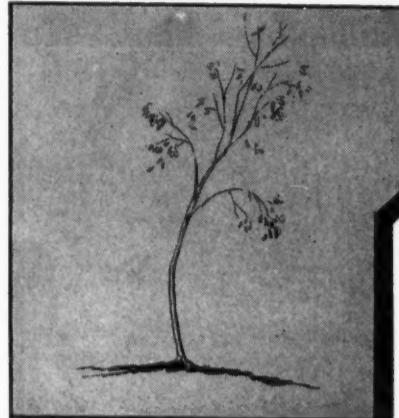
Gloss Semi-Gloss Flat

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As the twig is bent....



BUDDING leaves and sprouting plants tell more surely than the calendar that spring is here. Many a seedling is just starting its growth. For the boys and girls in the classrooms, it is the springtime of life. Budding tendencies determine, to a large extent, the slant of the whole future career.

Children can learn in school something more than mathematics or languages. They are affected deeply by surroundings. Clean, orderly classrooms, spick-and-span corridors, can help shape in the child, an approving attitude towards cleanliness, and sanitation. The pupil's imitative tendencies will be shown in increasing care of their own persons, in clean hands and faces, and greater observance of the niceties of dress.

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The principal purpose of the FINNELL SYSTEM of Scrubbing and Polishing, of course, is to **clean** floors. But this secondary result, the indirect influence on character, is one of its important values for school boards to consider.

Clean floors stay clean when the FIN-

NELL SYSTEM is used regularly. Hand methods, with their increasing expenditures and uncertain results, have been supplanted by the FINNELL in hundreds of schools throughout the country.

An All Purpose Machine

The FINNELL serves all kinds of floors equally well—floors of wood, tile, terrazzo, linoleum—floors in corridors, gymnasium, classrooms, locker rooms. It waxes, polishes, scrubs—wet or dry—as the type of floor requires. It rotates from three to eight brushes—instead of one. It applies continuously from 30 to 100 pounds pressure instead of the one to three pounds applied intermittently by a man or a woman.

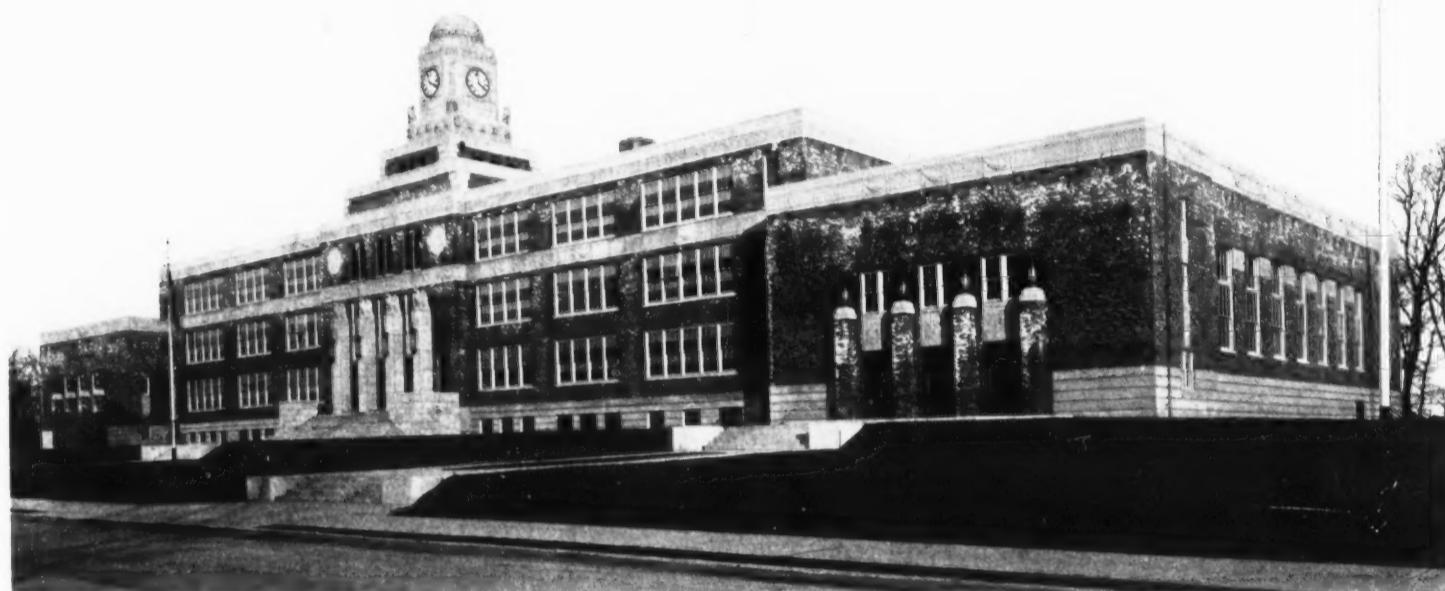
There are eight FINNELL models—an exact size to meet your requirements. Let us investigate your needs and submit an estimate of the size and type of system which will meet them economically. No obligation. Write FINNELL SYSTEM, INC., 805 East Street, Elkhart, Ind. Branch offices in all principal cities of the United States and Canada.



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